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EDITORIAL—SOME HIGHLIGHTS

I. General Economic Scene

State :

Fifth Plan and Sixth Finance Commission: The Union Government's decision accepting the recommendations of the Sixth Finance Commission (Summarised on page 779 of Vol. III of the Bulletin) was announced on December 18, when the report was laid on the table of both houses of Parliament. The award as it affects this State's Fifth Plan non-plan expenditures and resources is a set back and calls for careful negotiations with the Union Planning Commission for Plan assistance and resources and an intensified and perhaps innovative approach to resources mobilisation within the States of the order of Rs. 2,550 crores (See last issue, Vol. IV, page 9). The Finance Commission's major recommendation on transfer of funds to the States is set forth in the table below :

Estimated transfer during 1974-79 on the basis of the recommendations of the Sixth Finance Commission

(Rs. Crores)

States	*Taxes and Duties*	*Article 275 grant*	*Total*	*Percentage of the total*
Andhra Pradesh	570.08	205.93	776.01	8.08
Assam	185.09	254.53	439.62	4.57
Bihar	738.44	106.28	844.72	8.79
Gujarat	368.64	—	368.64	3.83
Haryana	120.66	—	120.66	1.26
Himachal Pradesh	43.10	160.96	204.06	2.12
Jammu and Kashmir	58.79	173.49	232.28	2.42
Karnataka	383.64	—	383.64	3.99
Kerala	271.04	208.93	479.97	5.00
Madhya Pradesh	543.57	—	543.57	5.66
Maharashtra	711.53	—	711.53	7.40
Manipur	13.48	114.53	128.01	1.33
Meghalaya	12.85	74.67	87.52	0.91
Nagaland	6.83	128.84	135.67	1.41
Orissa	272.59	304.73	577.32	6.01
Punjab	168.97	—	168.97	1.76
Rajasthan	333.39	230.53	563.92	5.87
Tamil Nadu	538.57	—	538.57	5.60
Tripura	19.69	112.50	132.19	1.38
Uttar Pradesh	1,150.22	198.83	1,349.05	14.05
West Bengal	588.07	234.86	822.93	8.56
Total	7,099.24	2,509.61	9,608.85	100.00

This trnsfer of Rs. 9,608.85 crores to the States during the Fifth Plan (compared to the transfer of Rs. 5,315.99 crores during the Fourth Plan) is based on the following principles: (a) the share of the States from income tax proceeds is increased from 75 per cent to 80 per cent: (b) the sharing of basic Union Excise duties will continue at 20 per cent for the States as will also the auxiliary excises: (c) the net proceeds of additional excises should accrue to the States at 70 per cent on the basis of population, 20 per cent on the State Domestic product and 10 per cent on the basis of the production of the commodities which pay the additional excises: (d) the existing principles of distribution of estate duty and grant in lieu of the repealed tax on passenger fares are to continue: (e) the wealth tax on agricultural property is to be distributed on the basis of the agricultural property located in each State: (f) backwardness to which a weightage of 20 per cent is given is measured by relative per capita income (25 per cent) and population (75 per cent) to determine the share of each State in the divisible pool. The backward States' needs for raising their standards of administration is assessed on the basis of the per capita expenditure on administrative services, primary education, public health, scheduled castes and tribes welfare which are computed at Rs. 838 crores for all States included in the grants-in-aid under Article 275 (1) of the constitution: (g) in place of a national fund for financing relief expenditure, provision should be made for drought and flood prone areas within the Fifth Plan of each State. For the backward States such a provision is made to the extent of Rs. 51 crores per annum in the grant-in-aid. On this basis the commission computes the revenue receipts and non-plan revenue expenditure of the States during the Fifth Plan, their requirements from the revised emoluments of employees, and the upgrading of the standards of administration. This non-plan revenue gap for 18 States amounts to Rs. 7,765 crores. With the tax devolution to the States amounting to Rs. 704 crores, seven States have a surplus of Rs. 2,176 crores and the remaining 14 States have a non-plan deficit after tax deduction of Rs. 2,510 crores which is what is recommended as grants-in-aid to them under Article 275 (1) as seen in the Table. The Commission has also for the first time in the history of our Finance Commission dealt with the non-plan capital gap—the debt owed by the States to the Centre which has become a veritable millstone round their necks (See Vol. II No. 10 pages 5-6). The Commission on the basis of a detailed study of the debt position of each State and using both uniform principles and some discrimination in favour of States needing larger relief, in chapter 16 has recommended debt relief of Rs. 1,969.62 crores to the States during the Fifth Plan. This covers their non-plan capital gap. The relief in repayments of loans to the Centre is large in the case of ten States (ranging from Rs. 109.7 crores for Kerala and 285.14 crores for Rajasthan) and rather low for 6 States (Karnataka which is one of the Seven States having no grant in aid belongs to the former group with a relief of Rs. 127.04 crores. The 6 States relief ranges from Rs. 32.5 crores for Gujarat and Rs. 87.05 crores for Tamil Nadu). The Commission also makes some general comments. It admits that its award is based on 1972-73 prices, pay revision upto 1 January 1972. and dearness allowance upto 1 May 1973. Any further increases in these items during 1973-74 (which have occurred due to inflation) the Commission states, can be met from larger tax receipts —the buoyancy in tax receipts. It also points out that the larger resources transfers it has recommended will in no way reduce the urgent need for mobilising resources by the State from the rural sector, for irrigation and power projects, plus

Rs. 434 crores needed as maintenance expenditure to maintain these works and which will not be considered part of the additional resource mobilisation required by the States. The Commission concludes with certain obiter dicta on Centre-States finance. It agrees with the position taken by the States at the December meeting of NDC (See last issue, Vol. IV page 15) recommending a considerable pruning in centrally sponsored schemes in the areas under the State's jurisdiction, so that the Union Ministries become expert specialised agencies to guide the States and not swamp themselves with operations which are not their responsibility. It is also right in pointing out that the basic problem is the slow growth of the economy which does not provide adequate resources for development and it is the function of all fiscal instruments at both the Union and State levels to be so deployed as to promote a faster growth of the economy. It is with regard to its comments and conclusions on the inherent problems of the manner in which the financial resources are divided between the Union and State governments and the traditions that have grown around their application that there is disagreement with the Commission. The Commission points out that as ihe Union revenues have grown from Rs. 404-51 crores in 1950-51 to Rs. 4,537.78 crores in 1972-73 (by 11 fold) and the States from Rs. 221.55 crores to Rs. 1,891-90 crores during that period (by 9 fold) and if the transfers to the States are taken into account the rates are reversed (9 fold for the Union and 11 fold for the State), the critique that the States are saddled with inelastic revenue resources to execute expanding development obligations is not serious. In fact it dismisses the grievances and criticisms of the system as "superficial", because the States have not acted responsibly in mobilising resources—particularly from the irrural constituents—agriculture, irrigation and power. It concludes by pointing out that in the interest of national economic integration - (this must be a new use of the term to refer to the spatially levelling process of penalising the growing and favouring the lagging areas of the Country)—the present division of revenue sources and the "automatic mechanism for canalising resources to the States for meeting all their genuine needs" is sound and can, if necessary, be improved within the existing constitutional arrangements. This group of comments and conclusions is somewhat specious. The inelasticity of the State sources of revenue is not only confirmed by their slower rate of growth but also in that they result in giving the States around 1/3 of the Union government's total revenue. Second the system is a call to financial improvidence and indiscipline. As long as article 275(1) continues to be interpreted, as it has from the First Finance Commission, as meaning meeting the non-plan revenue gaps of the States, the system is a call to States to present as large a non-plan revenue gap as possible. It is a premium on fiscal irresponsibility and financial indiscipline. That this is not just theory can be seen in the fact that the States who have not only raised their target resources but exceeded them during the Fourth Plan—the first being Tamil Nadu which raised Rs. 159 crores against the target of Rs. 85 crores, followed by Maharashtra which raised Rs. 122.40 crores against Rs. 80 crores, Gujarat which raised Rs. 67.16 crores against Rs. 41.18 crores, Madhya Pradesh which raised Rs. 97.89 crores against Rs. 83 crores and Karnataka which raised Rs. 86.76 crores against Rs. 73 crores have been excluded from any grants in aid under article 275(1). On the other hand the States which have made the smallest effort—U.P. raising Rs. 96.62 against the Rs. 175 crores target, Bihar Rs. 38.82 against the target of Rs. 100 crores, Assam Rs. 8.2 crores against Rs. 25 crores receive generous grants-in-aid. In fact the Fourth Plan will be ending with a shortfall in the total

States' target of Rs. 87.93 crores, which would have been much higher if it had not been for Tamil Nadu's notable effort of raising Rs. 74 crores above the target. It is to be fervently hoped that the first non-plan capital gap coverage now to be effected will not be used to further imbalance their capital budgets by some improvident States due to whose efforts the volume of Union loans have been growing at the rate of 235 per cent per annum during the last 22 years. There is an inbuilt premium in favour of not raising revenues, particularly those which are politically embarrassing and to increase non-plan expenditures—particularly staff salaries and allowances. In fact just before the Finance Commission is constituted is the season for such rises. (The last round of the third pay commission recommendations have fortunately come too late to be given effect to by the improvident States). But the most serious critique of the present Centre-State fiscal relationship is that it divides States into those who are financially prudent and those who are improvident instead of all–both States and the Union—being joined in a common effort to maximise resource mobilisation and minimise non-plan non development expenditure. Even more it introduces the distorted psychology represented by such terms "aid" "grant" "100 per cent Central assistance" "Central subsidy" and all the pernicious consequences of the donor-recipient, the giver-beneficiary relationship in an area where the resources in question belong to the Country and the people and not to any part of its government, and the relationship should be one of partnership and not of dependence. For Tamil Nadu the award represents a set back for its Fifth Plan. Though Tamil Nadu's percentage share of the 80 per cent income tax revenue is 7.94 per cent, of the 20 per cent excise is 7.43 per cent, of the net proceeds of additional excises 7.27 per cent, of the estate duty proceeds 7.61 per cent and on the relief account 1.52 per cent, its share of the total transfers declines from 6.97 per cent in the Fourth Plan to 5.6 per cent in the Fifth Plan. The State is thus faced with a serious resources problem on current account during the Fifth Plan as its loss of Rs. 200 crores because of the reintroduction of total prohibition from the start of the Fifth Plan has not been allowed for. The State government itself informed the Commission that its revenue will decline by Rs. 165.146 crores. The Commission has taken the position that its terms of reference oblige it to take into account the levels of taxation at the end of 1973-74 under which it can only assess the results of the closing of toddy shops which went into effect in September 1973 (See vol. III page 696) and on which the government computed an annual loss of Rs. 11 crores, against which the Commission adjusted the revenue from increased taxes on petrol, cinema tickets and stamp duty estimated at Rs. 4 crores per annum (See Vol. III page 473). The commission therefore allowed for a loss of only Rs. 18.16 crores during the Fifth Plan on account of prohibition and has expressed its inability to meet the cost of the policy of total prohibition. The State will also have to meet the cost of staff pay increases. For the Fifth Plan, the government will have to develop a plan to raise additional resources for both plan and non-plan expenditures to the tune of Rs. 1,448 crores (see next section), and negotiate with the Union Planning Commission on the size of and the volume of assistance for the Fifth Plan. Even the relief given on debt rapayment to the Union government is in the nature of postponement of repayments (rescheduling) and not relief. It is to be regretted that the Commission did not cancel at least this part of the debt, as it will not be available to the Union government during the Fifth Plan anyway.

Perspective Plan: The State's perspective plan forwarded to the government (See last issue Vol. IV pages 2-3) begins with a preface by the Deputy Chairman which calls attention to three imbalances that the State will face at the end of the Plan period — in water for domestic, agricultural and industrial use where the demad will exceed the available and potential sources of supply, in power where generation within the State will be less than the demand by 19,739 million units and in educated manpower which is the State's major development resource and where the number of educated unemployables and the unfilled vacancies for trained persons will reach serious proportions, if the present trends continue. This means that in the case of water and power, inter-state arrangements among Tamil Nadu and the other southern states and southern regional planning in the areas should be undertaken. In the case of education and training there must be a complete overhaul of the system in order to equate educational programmes and facilities with the skill demads of the market. It also calls attention to 3 factors in the Plan. First the plan period was established in the terms of reference of the Commission as the ten years 1971-81: the Draft perspective plan frame took as the time period the 12 years 1972-84 (See Vol. II No. 6 pages 1-5). The Perspective Plan now prepared while using 1972-74 as the reference year takes the 10 years 1974-75 to 1983-84 as the plan period. Second the commission was required to construct an input-output table which after studies it decided not to do as a State is not a closed system and such a matrix would be a theoretical exercise and from the policy point of view fruitless. In place it has used a consistency model to compute income, investment and growth rates. Third it has faced problems with the dearth of statistics at the district and block levels and the changing nature of the data series at the State level which call for continuous revision and refinement of the plan. The preface emphasises that the plan is feasible and the strategy outlined can lead to the attainment of the perspective goals.

The Introduction to the Plan sets forth the various studies undertaken at the sectoral, district and regional levels and the methods of weaving these various inputs including the approaches to social development planning and the constraints faced by a State planning effort in the development of the Perspective Plan.

Part I of the Plan consists of two chapters. In chapter I the State resources and institutions as secular trends are traced. The Forest resources which stand at 16.84 per cent of the State's total land area will during the perspective plan period expand by 6 per cent per annum beyond which further growth is likely to be quite limited. The mineral resources of the State, lignite, magnesite, bauxite, iron ore and gypsum would be covered by systematic geological surveys and the workable reserves of the various deposits located and their commercial exploitation started. Salt production along the coast will be expanded. The production of marine and inland fish will more than double from 4,13 000 tonnes to 10,86,000 tonnes, meeting the needs for fish-meal production, human consumption and exports. Water for domestic, industrial and agricultural uses by the end of the plan period will be in deficit by around 3 million gallons from the point of view of internal sources of supply. In power also at the end of the perspective plan period there will be a deficit as pointed out earlier of 19,739 million units vis-a-vis internal supply, calling for development of nuclear, solar, wind and other unconventional energy

sources and inter-state agreements. In agriculture, 47.5 per cent of the total land area of 130 lakh hectares is cultivable and further extension of the cultivable land is limited so that reliance must be placed on more intensive cultivation. The transportation network of roads, railways, posts and airways will be expanded and improved. Human resources development will call for reorganising the State's education and restructuring the health programme. The Institutional frame will call for changes in land policy, prices-wages, income policy and the effective management of public and private sector enterprises. The second chapter makes an assessment of the State's planned development. It records the creation during the first plan of a base for rapid development, the widening and strengthening of the industrial base during the second plan, and the considerable expansion in education and health services. The third Plan continued these trends, emphasised small industries and suffered agricultural stagnation due to the drought during the closing years of the Plan. On the basis of the recovery during the annual plans, the fourth plan has witnessed a breakthrough in agricultural production and a start on fisheries and animal husbandry development. The setbacks faced by the economy arise from mounting unemployment, shortfall in power supply, the inflationary spiral and the educational system being outdated.

Part II of the Perspective Plan comprises seven chapters outlining the Strategy for attaining the seven objectives of the Plan: (a) To double the per capita real income, the model of income, investment and growth rate summarised in Vol. III pages 691-692 is set forth as the strategy involving an increase of the State income from Rs. 3,100 crores in 1974-75 to Rs. 5,875 crores in 1983-84, the investment rising from Rs. 463 crores to Rs. 1,652 crores and the rate of growth from 4.55 per cent to 11.03 per cent at the end of this period. (b) To attain full employment the present unemployment and under employment of 46 to 52 lakhs of workers and the increase of the labour force of 44 lakhs during the plan period are taken into account in proposing an employment strategy to ensure that at the end of the plan period 211.85 lakh jobs are available, leaving an unemployed labour force of 3 lakh persons. (c) To mount the attack against poverty in a selective manner, three groups of poor are identified—the destitutes comprising 5 millions, the nutritionally poor constituting 16.95 millions and the poor who are denied the minimum food and non-food needs, comprising 24 millions. To lift the last group out of poverty, a programme of education, health, housing, water supply costing Rs. 212 crores during the plan period is proposed. To lift the second group, the employment strategy referred to earlier is to be used. For the rural destitutes, an annual programme of subsidised essential goods—rice, dhal, edible oils, sugar, kerosene and standard cloth is proposed at an annual cost of Rs. 11 crores (d) To remove economic and social inequalities, the removal of caste barriers, the raising of compensation for hard and untidy work, and an intensive programme to help develop backward areas are proposed. (e) To promote social change, a youth programme, a pre-school orientation effort, a variety of village level functional and general clubs, reduction of socially wasteful consumption, a campaign against corruption, a beggar relief and rehabilitation programme and a wide educational and publicity programme of the requirements of progress are proposed. (f) To humanise this development programme, an intensive effort to develop culture and build it into Tamil Nadu development is proposed involving the establishment of cultural development institutions at the village, block, district and State level,

legislation to develop these institutions and finance them, the optimum use of music, drama, books, newspaper and libraries, mass media and painting and the fine arts at a cost of Rs 10 crores during the plan period. (g) To decentralize the planning and decision making process, the development and strengthening of local government institutions and measures for the participation of people at the village, block and district level in planning and all decision making processes are proposed.

Part III consists of a chapter on District Plans which form the base of the Perspective Plan. The chapter sets forth the rationale of district planning as providing the means for locally planned and locally implemented programmes which are within their competence, the methodology in assessing the district resources, establishing the constraints and developing a need based district perspective and the constraints faced in having no tradition for local programming, the absence of a local system of monitoring and the lack of statistics together with a host of agricultural and infrastructural limitations. The highlights of the 23 development district plans are summarised together with a brief outline of each of the 23 plans. The chapter ends with the summary of the disttict plans outlay for the perspective plan period which has been reproduced in Vol. III pages 768-769 of the Bulletin.

Part IV which deals with human and physical infrastructure consists of 9 chapters. In the chapter on power, a forecast of power requirements in the plan period, using the demand forecast, overall growth rate, and energy forecast methodologies, with the conclusion that the generation capacity must increase from 2,064 MW in 1973-74 to 7,180 MW by the end of the plan period. For this 10 hydro-schemes, 5 thermal schemes including the second minicut at Neyveli, and 2 nuclear schemes at a cost of Rs, 481 crores in the Fifth Plan and their completion and the launching of 6 new hydro-schemes at a cost of Rs. 960 crores in the VI Plan are proposed, together with a programme for transmission and distribution, rural electrification, and R & D. The Chapter on Transport proposes an increase in length of roads from 55.1 kms to 61 by 1984, increasing road widths, and improving bridges and causeways and doubling rural roads—all at a cost of Re. 37 crores. Railway development will involve electrifying some sections, providing a second line track for certain sections, and converting four sections, from metre to broad gauges, at a total cost of Rs. 97 crores. In airways, new airports are proposed for Salem, Tuticorin, Cape Comorin and Thanjavur at a total cost of Rs. 1.20 crores. On ports, the development of Madras, Tuticorin, Cuddalore as major ports, 5 minor ports, the Sethusamudram canal and improvement of Cooum, the Buckingam and Vedaranyam canals, at a total cost of Rs. 60 crores are proposed. The chapter on urban development outlines a programme to provide for the growth of Madras and its satellites to 3.48 by 1984, Madurai, Coimbatore, Salem and Tiruchy growing to 1.97 million people, and Ramanathapuram and Dharmapuri calling for development of regional growth centres. It proposes an urban land policy involving public acquisition of urban land, urban planning and regional bases, town planning and legislation and the effective excution of the Madras Metropolitan Development Plan. The programme of urban housing covers slum clearance and improvement, housing for low income groups and industrial housing. The total programme calls for an outlay of Rs. 490 crores by the State and Central sectors and autonomous bodies. The chapter on tourism proposes improvement of tourist areas such as Madras, Maha-

balipuram, Kancheepuram, Tiruchy, Thanjavur, Madurai, improved transport and accommodation facilities and adequate infrastructure at a total cost of Rs. 41 crores. The chapter on Education, Science and Technology, after reviewing the current state of Education and Science in the State pointing to its grave setbacks—the high wastage, the outdated curriculum, the futile PUC, the examination break down, the unemployment and unemployability of its graduates, the outdated management system and the spiralling costs of education—proposes a complete restructuring ofthe entire system, linking the right to education with the right to employment. This involves providing everyone in the State with the minimum educational skills with an out-of-school programme for the 52 per cent drop-outs and a functional adult literacy progamme, making all secondary schools comprehensive or technical, retraining teachers, updating curriculum, adopting the 10-2+3 staging, organising out of school and out of college courses for an equal number of youth as those in school and college, setting up a State Council of Academic Awards to which all undergraduate colleges will be affiliated, starting some 10-12 autonomous colleges, stabilising university enrolments at current levels, replacing the examination system by the semester and internal evaluation system, developing the 3 universities into post graduate centres of excellence, launching a Madras University of Technology, expanding the Tamil Nadu Agricultural University, starting agricultural polytechnics, launching 7 technology centres, developing the public library system, modernising educational management and economising on finance. The outlay proposed is Rs. 309 crores for the plan period. The chapter on health, nutrition, Family Planning, water supply and sanitation, after reviewing the existing situation recommends a health programme served by mini-health centres for each 10,000 persons, 374 poly-clinic centres at the block level to serve 80,000 persons each and the mini-health centres, 86 taluk headquarters hospitals and the district general hospitals—all upgraded with expanded bed strength and specialist staff and siddha wings. The communicable disease programme will be intensified. Medical education is to be upgraded and a post graduate centre, a homoeopathic college and a second college of indigenous medicine are proposed. The nutrition programme is addressed to pre-school children who will be served by 12,500 kuzhanthaigal kappagams 15,300 pre-primary sections and centres for pregnant and nursing mothers. The family planning programme will aim at reducing the birth rate from the current 32 per thousand to 22 in 1984 through intensification of the methods, motivation and education. The urban water supply programme for the remaining 30 per cent of urban centres will be completed by 1977 and rural water supply will be assured to 4,916 villages for which there are no water sources, 2,230 villages which are in endemic areas and to 11,814 villages which have inadequate water, urban sanitation will be completed and a rural sanitation progamme initiated. The whole programme will be supported by an R&D effort and will call for a total outlay of Rs. 693 crores. The chapter on rural development, which brings together many of the proposals in the other chapters with a focus on the rural area, outlines programme in social education, rural educational building, agriculture, animal husbandry and fisheries, minor irrigation. women's welfare rural water supply, rural roads and housing, rural arts and crafts rural employment and a Rural Development corporation for each district. The chapter on co-operation assesses the present position of co-operatives, identifies their constraints arising from unlimited liability, factional politics, and increasing

overdues and proposes a financial outlay of Rs. 540.3 crores for the plan period, The proposed programme includes revitalisation of societies, a special bad debt reserve, an agricultural stabilisation fund, increased long term credit, co-operative marketing, distribution of inputs, storage, processing, consumer co-operatives and societies for particular groups—labour, washermen, barbers, salt workers etc. and a strengthened programme of co-operative education and training. The last chapter in this part deals with social welfare, which brings together the welfare proposals in other chapters covering (a) women's family and child welfare, programmes for the physically handicapped, the ageing, beggars and slums (b) correctional administration involving vigilance services and social defence (c) welfare of scheduled castes and tribes (d) welfare of backward classes (e) welfare of denotified tribes and (f) industrial relations and labour welfare. The outlay for the period proposed is Rs. 36 crores.

Part V covers the production programmes and comprises 7 chapters. The chapter on agriculture sets forth five objectives: (a) a balanced diet to the growing population; (b) adequate supply of raw materials to agro-based industries; (c) raising the living standards of the rural population; (d) earning foreign exchange; and (e) generating employment. To attain these objectives, a 6 point strategy is proposed comprising (a) water management involving modernisation of canals, improving tank efficiency, ground water exploitation, (b) integrated dry land development, (c) increasing input supply and credit (d) research and extension, (e) price policy and (f) changing the cropping pattern. Planning for a per capita consumption of 12 ounces of cereals and 3 ounces of pulses by the end of the plan period, the foodgrain target of 82.01 lakh tonnes and the pulses target of 7.68 lakh tonnes are set. Vegetable cultivation is to be increased from 1.17 lakh hectares to 4 lakh hectares and fruit cultivation from 85,500 hectares to 2 lakh hectares. The oilseeds production target is 24.58 lakh tonnes, the cotton target 11.88 lakh bales, sugar-cane cultivation target 1.65 lakh hectares, cashew nuts target 52,000 MT and turmeric, chillies plantation crops and flowers targets are similarly computed. The total outlay for this sector is Rs. 625 crores. The chapter on animal husbandry sets forth the aims as (a) increase in the animal protein production (b) producing adequate raw materials for animal husbandry based industries and (c) creating more employment opportunities. For this a programme of cattle and dairy development, poultry development, sheep, goats and piggery development, at a total cost of Rs. 69 crores is proposed. The chapter on fisheries sets forth the aims of increasing protein sources, foreign exchange earnings and employment and rural incomes. By 1983—84, 3,000 small boats, 300 medium and large trawlers and 4,250 power driven catamarans, the development of Madras and Turicorin harbours and 14 minor harbours, and similar development of inland fisheries resulting in a total production of 12.42 lakh tonnes at a total cost of Rs. 75 crores are proposed. The Forestry chapter points to the low forest area in the State, the continuous diversion of forests for other uses, computes the demand for forest products for pulpwood, rayon fibre, timber, matches, tanning, cashew, sandalwood and fuel, sets forth the plan programme for the conservation of reserved forests, the development of private forests and marginal and waste areas, the limitation and consolidation of settlement schemes, the expansion of cashew, tea and coffee plantations, an infrastructure of R & D, housing and road development and a planning wing under

the chief conservator of forests for development and planning of forests in the State. The outlay proposed is Rs. 26 crores. The chapter on minerals comprises the industrial use of certain available minerals, further exploration of mineral deposits comprising the clay deposits, an air borne survey of all minerals, the conservation of rare minerals, a programme of R & D and the establishment of a State Mineral Development Corporation. The outlay involved is Rs. 8 crores. The chapter on large and medium industries outlines the State's constraints in water, power, raw materials and finance, proposes a programme comprising steel and steel based industries, a copper smelter, expansion of the aluminium industry, machine making industries for textiles, sugar, cement, paper and steel, machine tools, the expansion of chemical and petro-chemical industry, a fertiliser plant at Cuddalore, pharmaceuticals expansion through TIDCO, an additional 2.3 million spindles involving expansion of existing units and starting 30-40 new units, expansion of the automobile industry, cement, salt, glazed pipes, refractories, electricals, electronics, sugar, paper and an R & D programme. A major sugar complex in Thanjavur, modernisation of the textile industry, industrialisation of Ramanathapuram, Thanjavur, Dharmapuri, South Arcot using the large houses, development of an industrial managerial cadre, joint stock companies for distribution of raw materials, establishing jute mills for meeting packaging needs and R & D in cloth and textiles and other areas are the highlights of the programme. The outlay proposed is Rs. 208 crores in the State, Rs. 1,025 in the Union, Rs. 1,022 in the private sector. The Chapter on small industries proposes an outlay of Rs. 60 crores on handloom development, admission of cotton weavers into the co-operatives, subsidy for interest on loans, and improved quality control and marketing facilities. In the case of small industries, an increase of the units from 25,000 to 75,000 is proposed at a cost of Rs. 300 crores involving active help from the nationalised banks, special finance facilities for low income artisans, and the provision of raw materials and infrastructure for the small entrepreneur.

Part VI of the Plan covers the planning pre-requisites in 3 chapters. The chapter on the development of backward areas defines backwardness in terms of low per capita income, low consumption level, unemployment and under-employment, poverty and lack of health and education facilities, proposes a strategy for concentrating action in a few areas, using district and regional plans to monitor development and providing the selected areas with all the inputs. It proposes such concentration during the plan period on four districts—Ramanathapuram, Dharmapuri, South Arcot and Thanjavur. The chapter on Research and Development surveys the existing state of R & D in the State notes that except in the agricultural area the achievements to date are meagre, stresses the importance of R and D for the State, which has no raw material and adequate capital resources, and lays down seven criteria for the development of this programme. It summarises the 106 R & D projects recommended in the various chapters of the Plan calling for an outlay of Rs. 54.98 crores and proposes a specific programme to strengthen science and technology teaching to back up the R & D effort. It recommends 10 sectoral research councils for Agriculture, Forestry, Fisheries, Veterinary, Power, Water, Industry, Medical, Education and Housing each to be chaired by the Minister concerned, with the senior scientist as Secretary. The Councils will be co-ordinated by the Tamil Nadu Science Foundation with the Chief Minister as chairman and representatives of the Councils, NCST,

and the five universities as members. The chapter on administration and implementation identifies the five causes for poor implementation – the inegalitarian society, and its parallel economy and corruption, declining savings and industrial unrest, insufficient managerial staff, lack of machinery for monitoring, evaluation and information for effective implementation and centralised plan formulation procedures. It proposes non intervention by political parties in plan implementation, a clearer definition of responsibilities at various planning levels—district, regional, State, inter-state and national, the establishment of District Rural Development Corporation or Agencies which should be made responsible for plan formulation and implementation at the district level, an overhaul of the administrative system in recruiting experts, co-ordinating the secretarial and departmental organs, adjusting budget procedures to development imperatives, setting up a proper monitoring and evaluation system, both at the departmental and overall levels, ensuring participation of voluntary agencies and universities in plan implementation and training planning officers.

Part VII consists of 3 sections dealing with the financing of the Plan. The first section makes a tentative estimate of the State resources for the plan which is quantified for the Fifth Plan at Rs. 1,448 crores and for the Sixth Plan at Rs. 2,904 crores, showing a resources gap of Rs. 84 crores and Rs. 196 crores for the 2 medium plans. It proposes a restructured tax system through widening the coverage of income tax administration, rationalising commercial taxes, increasing motor vehicles tax, agricultural income tax and urban land tax, increased market borrowing, small savings through a State Unit Trust programme and establishing a regional board of LIC, and increased borrowing by autonomous agencies. The second section deals with the public debt position of the State vis-a-vis the Union government which it is proposed should be increased considerably in view of the sound borrowing position of the State. It also proposes a programme of debt relief and rescheduling of the State debts and an inter-state loan council to introduce a degree of rationality in the public borrowing system. The third section deals with fiscal policy and proposes an integrated States-Union exercise in resource mobilisation, aid from States in the Union government's collection of income tax, a reduction in the Union government's expenditure on subjects which are within the States' competence – law and order, agriculture, health and education. It closes with a plea for improved capital formation and price stability.

Part VIII sets forth a machinery for continued refinement of the perspective plan. It proposes that the five variables on which the plan is taxed continuously reviewed and be the subject of studies, namely, (a) resources and institutions as secular trends, (b) goals as hierarchical controls (c) strategies as configuration of preferences (d) models as causative anticipations and (e) popular participation as the perspective base. All these five variables are changing. Notably the models used for computing income, investment needs, poverty and employment have used data series which are being constantly revised. It therefore proposes that the perspective plan be reviewed, refined and published before the start of every five year plan.

Prices : To continue its effort to keep consumer prices down, the government extended the Sales Tax concession on all varieties of pulses and on groundnut oil from January to March 31. This will mean that the concession will have been in effect for 9 months starting on 1st August 1973 (See Vol. III page 616).

Power: The power situation in the State continued unaltered with the 15 per cent cut during the month of December 1973. Tamil Nadu and Karnataka have agreed that Karnataka will supply 20.5 lakh units which will be used by Tamil Nadu to produce additional chassis and tyres which will be shared between Karnataka and this State in the ratio of 60:40. This State and Kerala are discussing the possibility of Kerala supplying 100 million units of power over and above the 300 million units agreed upon upto May 1974 (See Vol. III page 618). Kerala has agreed to supply an additional 30 million units and it is only if there are further supplies that there will be relief in the 15 per cent cut. The relative failure of the North East monsoon and the delay in recommissioning of the damaged unit at Ennore (See Vol. III page 618) which was expected to be operative in March and is now delayed till May makes further relief problematic. Meanwhile December witnessed a parlous situation with regard to coal deliveries to the thermal stations. The stations require around 4,000 tonnes of coal per day or 1.3 lakh tonnes per month. Of this, 70,000 tonnes a month are to be supplied by Singareni coal mines in Andhra Pradesh, 30,000 from the Bengal-Bihar mines and 30,000 from the Madhya Pradesh mines. The dearth of ships, the flooding of the Orissa mines, the growing demand of Andhra Pradesh plants for coal and the diversion of coal arrivals in the State for use by the railways, reached a crisis point in December. Singareni deliveries declined from 41,000 tonnes in July to 27,000 tonnes in August, 20,000 tonnes in the subsequent months and to 18,600 tonnes as of December 18. In place of the five ship-loads of coal every month, November saw only one and for December no allotment was made. It is essential that the Singareni supplies of 70,000 tonnes per month and the supplies from North be regularly made available to ensure that the power situation in the State does not suffer a drastic decline—as analysed in Vol. III/468-470 of the Bulletin. Neyveli's renovation and oil firing units referred to in the section on industrial development later takes on urgency in view of the oil crisis. The Union Planning Commission has officially sanctioned the establishment of Tuticorin thermal plant, at a cost of Rs. 75 crores (See last issue, Vol. IV page 4). The plant will have three 250 MW units each. 359 acres from the harbour area have been set aside for the building of the plant.

The power situation in the Country continues to be normal. The future however needs review in light of the crude situation to be analysed later and its serious and possibly damaging effect in the Fifth Plan. The nuclear energy programme now takes on new meaning and urgency. The fact that our energy supply is dependent only to a limited extent on crude compared to the U. S., Europe and Japan and that the nuclear source option is wide open should lead to increased effort in this direction. India's large deposits of thorium which is the fuel of the future, means that we will have to master quickly the fast breeder technology by the end of the Fifth Plan. For the Fifth Plan itself we should depend on coal as the source, calling for a concentrated effort to get out the coal from our large underground supplies. We can then move to nuclear energy in the Country during the Sixth Plan. Meanwhile we should aslo use now the alternate power sources—the Gobar gas which can be increased quickly, and solar, wind and water energy—which are no longer pilot projects but are immediate viable alternatives.

Area Studies: Further to the techno-economic studies of the backward districts of Dharmapuri and Ramanathapuram

referred to in Vol. 11 No. 4 page 1 and Vol. 111 pages 92-93 of the Bulletin, similar techno-economic surveys of two other backward districts—Thanjavur and South Arcot–have been completed by FEDO/FACT. The Thanjavur Survey begins with the fact that 87.3 per cent of the total cultivated area is devoted to paddy and 10 per cent to cash crops like sugar-cane and ground-nut. Paddy having no industrial potential and little re-circulation of the surplus within the district, the raising of the standard of living of the small farmers and landless labourers requires a change in the cropping pattern which also is a pre-requisite to the industrialisation of the district. The IADP will increase paddy yields by 5 per cent per annum and so without disturbing this important crop production or reducing its area of cultivation, a new cropping pattern is proposed under which in certain specified areas large scale cultivation of sugar-cane, cotton, tapioca, ground-nut, mesta, agathi etc is proposed. Through bore wells, new areas including some dry areas can be brought under cultivation of this programme and seed farms and demonstration farms for sugar-cane, pulses, mesta, jute and cotton are proposed. One agro-service centre for every panchayat union and muncipality will provide farm inputs and other services to the farmers at reasonable costs. The cane cultivation will feed a few sugar factories, and distillaries. Mesta and Agathi together with bagasse from the sugar factories will provide the raw materials for one or two paper factories. Sunflower will feed oil extraction mills, cattle feed units and confectionaries. The cashew development programme will develop the cashew industries, tapioca in padugai lands and hybrid maize in rice fallows will provide for starch and malt manufactnring units. The 22 new industries proposed are estimated to cost Rs. 7,434 lakhs as fixed capital and Rs. 15,960 lakhs as working capital, and the benefits from this investment are computed at Rs. 24,000 lakhs per annum. Their employment generation is estimated at 552 skilled workers and over 1 lakh of semi-skilled workers. The coastal area of the district opens up a considerable spurt in fisheries development. The development of fishing harbours at Nagapattinam, Mallipattinam, Point Calimere and mechanised boats and Country crafts will double marine fish landings. Fish preservation, processing the packing industries will follow the setting up of freezing cum cold storage plant facilities. Inland fishery will also be increased. The total investment in this sector proposed is Rs. 253 lakhs to double the catch at 45,000 tonnes and the value at Rs. 500 lakhs annually, employing 3,900 skilled and 6,200 unskilled workers. In the area of animal husbandry an outlay of Rs. 77 lakhs is proposed, to establish a cattle farm by importing exotic cattle, to develop existing farms, to start a hatchery cum poultry food compounding unit and to establish a sheep farm and wool extension centre. This will also build pasteurisation plants processing units, 1 tannery and cattle feed unit. To support this entire programme a massive programme of public work is proposed, involving construction of roads, bridges, irrigation works and canals and strengthening of culverts, bridges canal bunds together with improving and expanding the existing road net-work. A major project in this area is an inland navigation canal from Grand Anicut to Nagapattinam, touching all the major economic centres en route and through its feeding road net work connecting the interior parts of the district. This infrastructural programme will have a large employment component. The survey proposes that to start the process of industrialisation, the government should launch a few pilot projects, arrange for management educa-

tion through seminars and training to motivate entrepreneurs and that the whole programme should be placed under a district promotional agency, which could be on the lines of the District Rural Development Corporation established in Ramanathapuram and Dharmapuri and recommended by the Plan Implementation Seminar. (See Vol. III page 760 of the Bulletin).

The South Arcot survey calls attention to the intensification of agriculture in the district which is its principal sector. Its finding is that agriculture practices within the district are good, a large part of the cultivated area is irrigated, fertilisers and pesticides are widely used, so that on the basis of its food grains surplus, the current multi-cropping programme should be developed to increase existing yields and introducing new commercial crops to provide raw materials for new industries. To make the new pattern a success, it recommends that the target programme be supplemented by a demonstration of its various components in terms of organisation, physical inputs, financial resources, technical support and infrastructure of marketing, processing, storage, transportation and communication. The recommendations include a bore wells energisation programme in Tirukoilur, Virudachalam, Tindivanam and Kallakurichi, 40 Agro-service centres involving one for each panchayat union and municipality at a total fixed cost of Rs 108 lakhs and working capital of Rs. 1,475 lakhs, jute cultivation, Tapioca cultivation, sisal plantations, sericulture and sunflower cultivation. The estimated outlay for implementing the agricultural development programme is Rs. 300 lakhs as fixed capital and Rs. 1,676 lakhs as working capital, providing employment to 1,254 skilled persons and over 1 lakh of semi-skilled and unskilled persons. The fishery programme proposed involves developing fishing harbours at Cuddalore and Porto Novo, with facilities for landing, berthing and repairs of fishing vessels. The fish based industries proposed are processing shark fins, and extraction of fin rays, fish maws, chitosan, soup powder, fish ensilage, fish-meal at a total cost of Rs. 245 lakhs, employing 1,455 skilled workers, and 2,010 unskilled workers. Dairy development on scientific lines which is now lacking is recommended through the mass upgrading of bulls, two cattle feed units, one broiler farm rearing 1,000 birds, a pastereurisation plant at Cuddalore, a milk cooperative, poultry dressing plant, slaughter house and semen banks at a total cost of Rs. 128 lakhs, generating employment for 280 skilled and 810 unskilled workers. The expansion of 15 industrial units and starting 25 new industries starts with revamping Neyveli and proposes the second mine cut, a major fertiliser plant at Cuddalore, a refractory unit at Virudachalam, a fibre board and paper project, a glass bottle unit at cuddalore which could develop as a growth centre. So also Villupuram with engineering goods production, Virudhachalam with its clay and mineral based industries, Kallakurichi and Thirukoilur with its sugar belt and Neyveli with its small scale industries are to be developed. The agro-based industries are rice mills, sugar, vanaspati, starch and sericulture units.

This programme calls for developing infrastructural facilities of a broadgauge railway, a road net-work, with expressways, strengthened bridges, culverts as part of a massive public works programme including road building, land reclamation, drainage, soil and water conservation. The survey also recommends a district agency for mobilising the human and material resources for this programme. The two surveys are broadly in line with the development district development plans (See Vol. III pages 311-312). There is

however, a certain repetitive uniformity in the 2 reports which raises the question as to whether it would not be wiser in the future to get different agencies to undertake the different district surveys.

Local Government Reform: Further to the reform of local government proposed by the State Administrative Commission, summarised in Vol. III pages 555-556 of the Bulletin, the Commission issued in September 1973 a further report on district revenue and general administration. It begins with pointing out that administration at the grass roots level by the present generation of village officers with feudal traditions is inconsistent with the egalitarian principles of the Constitution and proposes replacing the present part-time village officers by regular whole-time and transferable public servants, with upgraded educational qualifications, each having a jurisdiction 3 or 4 times larger than the present revenue group —related to the recommendation for enlarged village panchayat made in its previous report (See Vol III page 556). Under this village hierarchy, all junior assistants in the Revenue Department will be required to work as village officers. Periodic resettlements must be revived to update the registry, incorporating the wet assessments and water rates in the proposed re-settlement. The proposal to the land revenue system to make it a service charge for maintenance of survey and land records and supply of irrigation water is not recommended because it may change the concept of State ownership of land and involve too many changes. It should be a tax on agricultural income. On the basis of periodic re-settlements, patta pass books should be prepared and issued. The village officer should be required to inspect every field in the village three times a year and sample methods should be followed in recording the Adangal. All cases of encroachment, water rates remission etc. should be decided by the Deputy Tahsildar and on appeal by the Deputy Collector. The Revenue Inspector level is proposed to be abolished and the Deputy Collector would be the head of the taluk office assisted by a Tahsildar and a number of Deputy Tahsildars. The size of the existing districts is to be reduced in the next 7/8 years and 5 or 6 new districts are to be created along lines and in stages spelt out in para 8–8 of the report. It recommends Tuticorin, Virudhunagar, Dindigul, Nagapattinam, Neyveli, Tiruvanammalai, Erode, Manamadurai as growth centres—using the term growth centres in a different sense from which the State Planning Commission uses it. It recommends that the Revenue Board members should be declared secretaries to government and that the new commissioner for agricultural production and panchayat development who will also be a Food production commissioner should be a member of the Board. This is a good group of recommendations. The recommendations on land revenue need further study. The minute of dissent brings out the other issues which must be taken into consideration in making final decisions on the report.

Transportation: The Cholan Roadways Corporation's annual report for 1972–73 records a 47 percent increase in fleet strength, from 176 to 263, doubling its kilometrage carrying 2.25 lakh passengers per day and earning Rs. 70,000 per day. It calls attention to the deltaic topography of Thanjavur district with its tortuous road routes following the course of the old, winding and narrow embankments which hamper the speed of the vehicles resulting in low utilisation. Also the economic, social and cultural pattern of the district causes ephemeral peak traffic demands and the large number of overaged vehicles of different makes

added to the difficulties. Despite all this, the company made a gross profit of Rs. 3.25 lakhs and a return of 14.5 per cent on its capital. The company plans to introduce the employees' participation in equity and management during the current year and is changing its system of recruitment and training of drivers and mechanics. In order to make its contribution to meeting the crude oil crisis, the company is establishing the maximum speed for its vehicles to ensure economical use of diesel, replacing overaged vehicles which consume 20 per cent more fuel, re-arranging its frequency of services, taking into account the marginal load factor, and improving the design and body of the vehicles which will save on their fuel consumption.

One of the Metropolitan roadway projects under study is a 10 KM subterranean expressway from Teynampet to Parry's Corner in Madras city. It will be constructed 11 feet below ground and have 4 lanes. It will be aligned along Mount Road and will have a branch at the Stanley viaduct where one part will go on to Poonamallee High Road and the other to Parrys. The Highways Department estimates the cost at Rs. 120 crores for which World Bank aid is suggested. Given the oil crisis to-day and the shortages in the future the priority to be given to this project in light of the various competing demands for power, water and transport needs to be examined by the government and the State Planning Commission. The work on the Madras Port last analysed in Vol. II No. 3 page 12, No. 4 page 19 and No. 10 page 22 of the Bulletin has progressed to the point where the cargo handled during the last months of 1973 was double that at the end of 1972 at 7.5 lakh tonnes. The fully mechanised system for handling 5 million tonnes of ore now and later 8 million tonnes at a rated capacity of 8,000 tonnes per hour is progressing well but the cost of the programme has also near doubled from Rs. 970 lakhs to Rs. 1,635 lakhs. The berth and dumper house construction and the installation of mechanical and electrical equipment is nearing completion. The fisheries harbour attached to the port will soon begin construction and will be completed by 1976, if the Union government funds are allotted and made available on time. On the other hand, the Union Ministry techno-economic working group has not selected Mandapam or Tuticorin as one of the four shipyards to be developed. In addition to the existing yard at Vishakapatinam, Mazagaon Dock and Garden Reach, the locations recommended are Hazira (Gujarat), Cullwangi (Goa), Paradip (Orissa) and Haldia (West Bengal). Neither Mandapam nor Tuticorin passed the criteria of transport net work, land and water areas, winds and waves, rainfall and climatic conditions, soil conditions, construction potential, nearness to industrial base as the four selected sites did. In the case of Tuticorin it was felt that it would infringe on the port project now under execution. The government in December collected and computerised all the details relating to petrol and diesel driven vehicles, mopeds, scooters, motor cycles, taxis and station wagons. This survey included government department vehicles. The results will be used when petrol rationing is introduced.

Housing: The Tamil Nadu Co-operative Housing Society (the State equivalent of the Central Society (See Vol. III page 401) disbursed Rs. 6 crores in 1973-74 as housing loans compared to the Rs. 3 crores in 1972-73. Of this Rs. 6 crores, Rs. 4 crores have been obtained as an LIC loan. It expects to operate at a level of Rs. 12 crores, with an LIC loan of Rs. 9 crores in 1974-75. Housing in the State has been considerably promoted since this apex body was formed and the procedures

for recovering loans streamlined. In fact, the government has under consideration authorising the society to issue cement permits to loanees in order to eliminate procedural delays in obtaining cement for the houses being constructed. The do it yourself low cost house designed and exhibited in December represents a real saving to the low income earner. The house consists of a living room cum dining room, a bed room, a kitchen cum store, and a bath room. With a plinth area of 516 sq. feet, it uses only Rs. 8,370 of cement and steel instead of the Rs. 81,000 normally used.

Textile Wages: Following the chief minister's negotiated agreement in March 1972 with textile workers and managers on point 5—referring to a judicial enquiry committee on wage and dearness allowance revisions (See Vol. II No. 4 page 21 of the Bulletin),—the conciliation committee consisting of representatives of labour and management of the textile industry with Mr. Aruna Giri as Chairman announced in early December a deadlock in their work. No agreement could be reached between the representatives of labour unions and management in the committee on the revision of wages and dearness allowance. The chairman then announced his award—that all textile workers in the State should have an increase in wages of Rs. 5 per month from January 1974 and by a further Rs. 2.50 per month from January 1975 and that from 1974 D. A. at the rate of 28 paise per every point in the cost of living index over 340 should be granted. Both labour and management rejected the award, and each number has written a separate report. INTUC has called on the government to decide in their favour as otherwise there would be further agitation. Unfortunately the government will now have to step in and help in developing an agreement using the chairman's award as a base.

Food Adulteration: Food Adulteration referred to in Vol. III pages 617 & 773 of the Bulletin is reaching serious proportions. In early December, a group of 148 persons were poisoned in Veerapudayanpatti village and had to be treated in the Dindigul hospital. The Consumers' Council of India in a survey has established that in 1973, 4,087 persons were poisoned and 1,063 killed from adulterated food. This was nearly double the number of those who died from food poisoning in 1972. The highest deaths were in West Bengal (256) Orissa (150), Jammu & Kashmir (120) U.P. (109), and Bihar (105) mostly due to liquor poisoning. Tamil Nadu and Kerala are at the bottom with 11 deaths each. The Council says that every food item is poisoned—tea with grey stems of small plants, ghee with vegetable fats, edible oils with diesel oils, turdhal with sand, chili powder with clay powder and so on. The demand for the adulterants is so great that they are in short supply. Under these conditions the Union Ministry of health has announced that the Prevention of Food Adulteration Act is to be amended to enhance the punishment of offenders and ensure effective co-ordination among the various government agencies. Also the Consumers' Councils should mobilise public opinion against the shops selling those goods. In the State, the Food inspection officers should become more vigilant about adulterated food and the deterrent punishment for the guilty should be swiftly administered.

Welfare Measures: Following the replacement of handdrawn rickshaws by cycle rickshaws (See Vol. III page 696), the legislature passed a bill in December the Hackney Carriage Amendment Bill—banning handdrawn rickshaws throughout the State and a programme for rehabilitating the handdrawn rickshaw pullers. Upto

December, Rs. 13 lakhs from the Chief Minister's Fund has been disbursed for 14,000 bicycle rickshaws. Each handrickshaw owner received Rs. 200 in compensation, all 1,432 hand rickshaws in Madras, Chingleput and Cuddalore have been withdrawn and another Rs. 12.8 lakhs is being used to distribute 1,500 cycle rickshaws to poor persons on a hire and purchase scheme. Each allottee pays Re. 1 a day for 1,000 days and then becomes the owner. This State has pioneered in this important social legislation of the Country.

National :

Fifth Plan : The Draft Fifth Plan approved by the National Development Council (See last issue, Vol. IV pages 8-15) is the subject of national discussion in various forums in relation to (a) the targets proposed (b) the total outlay and the resources to be raised, (c) the foreign exchange gap and (d) the strategy to attain the poverty eradication objective—The targets proposed are higher than the Fourth Plan targets or achievement but in general lower than those proposed in the approach paper as the following table shows :

(million tonnes)

Item	*Fourth Plan target*	*Fourth Plan achievement*	*Approach targets*	*Fifth Plan target*
Foodgrains	129.00	114.00	139.90	140.00
Coal	93.50	79.00	141.20	135.00
Iron ore	51.40	37.00	66.50	58.00
Crude	8.50	7.70	7.77	12.00
Sugar	4.70	4.30	5.80	5.70
Cotton Cloth (mill. metres)	5,100.00	7,800.00	14,703.00	10,000.00
Jute manufactures	1,400.00	1,200.00	1,636.00	1,500.00
Paper & paper board	850.00	830.00	1327.00	1200.00
Newsprint	150.00	43.00	159.30	151.00
Fertiliser (nitrogenous)	2,500.00	1,162.00	3,912.00	4,000.00
Fertiliser (Phosphates)	900.00	350.00	1,174.00	1,250.00
Petroleum products	26.00	21.50	36.00	34.60
Cement	18.00	16.00	26.80	25.00
Mild Steel	8.10	5.44	9.40	9.40
Pig iron for sale	3.80	1.80	3.80	2.50
Aluminium ingots	220.00	190.00	423.00	370.00
Power generation (bil. kwh.)	85.00	72.60	129.30	120.00

The issue is whether these revised Draft Fifth Plan targets can be realised even with the larger outlay of Rs. 53,000 crores that is proposed. The various constraints should be identified in regard to each production sub-sector and an assessment made as to their impact and means of overcoming them. With regard to the total outlay proposed there is the suggestion that the effort at resource mobilisation proposed under the public sector undertakings and the budgetary surpluses and household savings are on the high side and are in any case related to the kind of growth predicted in the table. Any shortfall there will result in a fall in resources. Hence there is a growing consensus that the first priority is to arrest inflation and introduce conditions of price stability. The proposals to attain this, range from no deficit financing and no increase in bank credit to the Union or State governments (that is no bank borrowing for any purpose) to a once over cut in all prices, wages, incomes and profits. There is also the suggestion that to execute realisable targets a much smaller outlay is adequate. On the foreign exchange gap there is discussion around the export and import figure assumptions and the estimated net foreign aid of Rs. 2,250 crores means a gross foreign aid of Rs. 4,000 crores a figure on the high side. The small sum of Rs. 200 crores shown under PL 480 is really non existent as this sum has long since been spent when PL 480 goods were sold. Finally policy discussions range around the instruments for attaining the poverty eradication objective. In the Rajya Sabha, the government admitted that the per capita consumption of the bottom 5 per cent had remained static in the past few years. Against this, the instruments for ensuring lifting the 30 per cent in the bottom rung out of poverty need to be further spelt out. The president of Indian Economic Association suggested at the annual conference fixing a minimum income of Rs. 200 per month and a maximum of Rs. 2,000 per month together with an employment guarantee programme to attain this objective. The Institute of Financial Management Seminar in Madras proposed the setting up of a small council of economists to guide the Fifth Plan in using feasible instruments. The President of the Agricultural Economics conference, proposed a comprehensive farm policy as a means of ensuring optimum use of land and diversification of agriculture. Also it has been suggested that some of the targets such as those for wheat and rice vrs coarse grain, those for cloth vrs art silk fabrics etc. should be re-examined in light of the poverty eradication objective. These discussions should lead not only to further clarification and needed changes but to the firming up of the programme and instruments for executing the plan.

Credit: December 1973 witnessed tight credit conditions. The inter bank call rate rose to 30 per cent and unofficial hundi rates in Bombay rose to 22.5 per cent against the legally permitted rates of 13 per cent for secured and 15 per cent for unsecured loans. Following the Reserve Bank directive, major commercial Banks raised interest rates on advances up to 14 per cent, being a 1.5 to 2 per cent increase. All rates rose during the month reflecting the Reserve Bank credit regulations (See last issue, Vol. page 16). By the end of November 1973, bank credit had increased by Rs. 25 crores to Rs. 658 crores. The Reserve Bank's plan was that for the busy season October 1973—April 1974 the credit expansion (excluding food procurement advances) should be Rs. 600-650 crores. But in the first two months—October and November Rs. 300 crores have been advanced to industry, commerce, export and trade and only

Rs. 300—Rs. 350 crores were left for 5 months of the busy season. This in part accounts for the jumps in interest rates and the inter bank call rate. Against this background the Indian Bankers Association intervened to fix a ceiling of 15 per cent for inter bank call rate from mid-December. The steep rise in interest rates was an indication that the Reserve Bank's hope that the demand for credit will begin to slacken did not materialise. The effectiveness of the interest rate ceiling was also in question throughout the month, (the rate ranged around 20 per cent), as the credit demand kept increasing and had to be met despite the suggested ceiling. The Association also requested RBI to ease the credit regulations imposed in November by reassessing the resources position of each bank on the basis of which the discretionary accommodation to each of them could be adjusted. The actual development in credit availability involved the reduction of inventories by the business firms, a quicker turn over of the bank resources and accounts and a continuing spurt in the growth of deposits. There was general unease in all industrial circles, particularly among small industrials at the uniform application of the credit squeeze. The IDBI is becoming a holding company of other financial institutions (see Vol. III page 782) and legislation to this effect was introduced in the December session of Parliament. Under the Act, the government will take over the shareholding of IDBI and constitute a 15 member board with a chairman, managing director and representatives of public financial institutions and public sector banks, industrialists and economists. A Union Finance ministry survey of credit policy published in December 1973 shows a sectoral shift in the distribution of credit. Between March 1968 and April 1973, the share of large and medium industries declined from 60.6 per cent to 49.2 per cent, while the share of small scale industry went up from 6.9 per cent to 11.6 percent and that of the wholesale trade other than food procurement but including the public sector trading corporation declined from 14.2 per cent to 12.2 per cent. In this latter regard, the major share of private credit was not to wholesalers but to processing units, namely rice mills, roller flour mills, registered oil mills, vanaspati manufacturers, paint and soap manufacturers. In fact when wholesale trade in wheat was nationalised this year, all credit to wholesalers was stopped and whatever credit was outstanding with them was recalled. These survey results are heartening as they show that one of the basic objectives of bank nationalisation was being met—that of promoting the small sector and the negleted man. FASI however claims that the small iudustialist still suffers from lack of adequate credit. The concluding section on the role of credit in explaining the current prices inflation sounds, however, somewhat trite and like an apologia. It states the obvious when it points out that monetary policy is not the cure all to inflation, that the price rise is the result of many factors besides credit availability and that in an economy which is not fully monetized and where agriculture provides employment to 70 per cent of the people, forms 60 per cent of total household consumption and 85 per cent of commodity consumption of households, the trend in agricultural production rather than the volume of credit will exert a decisive influence on prices.

Deficit Finance and Central loans: The price situation had not materially altered since the reference in the last issue (Vol. IV. page 15). As at December 8, the wholesale price index showed a small decline by 0.1 per cent compared to the previous week, and the all commodities

index by 0.6 per cent. The Union finance ministry announced at the end of December that the year's deficit will be much higher than the Rs. 85 crores budgeted as it had to provide Rs. 145 crores for famine relief, Rs. 147 crores for the crash rabi programme, Rs. 40 crores for fertilisers purchase for the rabi crop, a special accommodation of Rs. 153 crores to some States, and Rs. 300 crores on the Pay Commission recommendations. On the other hand the resources mobilised during the Fourth Plan were a solid Rs. 3,200 crores compared to the plan target of Rs. 2,100 crores. In 1971-72 for instance the Rs. 112 crores decline in external aid was compensated by Rs. 126 crores market borrowings, Rs. 44 crores small savings and Rs. 210 crores additional tax revenue. Despite all this and the improved agricultural production for this year, the deficit for the year is likely to be Rs. 500-Rs. 600 crores. During December, the Union government's third borrowing programme was completed. Calling for 3 loans amounting to Rs. 115 crores, it received Rs. 116.84 crores. This means that for this financial year it has raised a gross amount of Rs. 1,034.74 crores, and a net amount of Rs. 471.20 crores against the budgetted Rs. 326.40 crores. About 50 per cent of the loan was taken by the RBI which will be taken over by the banks by the end of January in conformity with the directive of maintaining 30 per cent of fresh deposits in gilt edged securities. Normally this public borrowing from the banks would have an inflationary effect, but with the various credit restrictions in force since November, this mopping up of bank resources will reduce the supply of money to the business sector and will be available to the government to contain its deficit financing in relation to the food subsidy, wages and D. A. increases.

State of the Economy : CSO provisional estimates show that in 1971-72 national income rose by a meagre 1.7 per cent over the previous years, mainly due to the fall in foodgrains production which led to a fall in net agricultural value by 1.9 per cent, while manufactures rose by 2.8 per cent. The contribution of agricultural income to the national income fell by 6.7 per cent, while that of manufaetures rose by 9.2 per cent. Its quick estimates for 1972-73 show an increase in national income by an even lower 0.4 per cent (as compared to the 2 per cent estimate of the RBI study published in its October 1973 report—(See Vol. III page 780 of the Bulletin). Because of this, the 2 per cent growth in population meant that per capita income in 1972-73 declined to Rs. 337.5 at (1960-61) constant prices compared to Rs. 343.6 in 1971-72 and Rs. 345.6 in 1970-71. A gap is shown in the estimates of savings and capital formation. The rate of domestic savings was 11.7 per cent in 1970-71 against a rate of domestic capital formation of 12.7 per cent. This gap is closed by net capital inflow from abroad which has increased from Rs. 481 crores in 1960-61 to Rs. 929 crores in 1966-67. It was Rs. 397 crores in the 1970-71 estimates, which are close to those of RBI.

National Production Front :

Industrial growth : The Union Planning Commission and the Economic Times Research Bureau estimates of industrial growth for the current year like those of the Union Ministry of Industrial Development analysed in the last issue (See Vol. IV page 16) are bleak. The Planning Commission's estimates for the current year's industrial production show larger shortfalls than the government summary reproduced in Vol. III pages 628-629. For steel ingots, against the target of 10.8 million tonnes, 7.14 million tonnes are the likely achievement, for steel production

against the target of 13 million tonnes, 11 million tonnes are the likely achievement, for nitrogenous fertilisers the target is 25 lakh tonnes and the achievement 11 62 lakh tonnes, for phosphatic fertilisers against 9 lakh tonnes, 3.5 lakh tonnes are estimated, for industrial machinery the target is Rs. 51.5 crores and the production Rs. 30 crores, for wagons the target is 30,800 and likely output 13,000, for cotton cloth against the target of 5,100 million metres, the production estimate is 4,200 million metres, for textile machinery Rs. 45 crores and Rs. 35 crores, for tractors 50,000 target and 40,000 achievement, for commercial vehicles against a target of 85,000 only 48,000 are likely to be produced, for newsprint against the target of 1.5 lakh tonnes the production estimate is a mere 43,000 tonnes and for coal the target is 93.5 million tonnes and output is estimated at 79 million tonnes. Only in the case of paper and paper boards and oil production are the shortfalls small. A comparison of these achievements with the Fifth Plan targets referred to earlier, raises questions about their feasibility and points to the effort which has to be made to get near them. On the other hand the improved performance of the public sector units under the Ministry of Heavy Industry during the first six months referred to in the last issue (See Vol IV page 16) continued during the following 2 months, so that the year will end with units making a profit of Rs. 8 crores against the loss of Rs. 13 crores last year. The monthly monitoring of the production of each by the cell in the Ministry referred to in the last issue had helped. The 14 units production for April—November 1973 was Rs. 214 crores—a 48 per cent increase over the first 8 months of last year. BHEL's production increased by 105 per cent, Heavy Electricals Hardwar by 68 per cent and Bhopal by 79 per cent, Bharat Heavy Plate and Vessels by 45 per cent, MAMC by 69 per cent, Triveni Structurals by 40 per cent, Tungabhadra Steel by 40 per cent, Hindustan Machine Tools by 29 per cent. Heavy Engineering, Machine tools and printing and diecasting machinery are not showing improved performance and are being reorganised to ensure similar achievements. For the private sector, the Economic Times research bureau's study of 61 big business houses shows that they have completely recovered from the recession in 1966-67, and that in terms of the per equity generation, gross value added, profits after tax, cash earnings, dividend, net worth and total capital employed, they were doing well with some dips and many variations. There are income and earning per equity variations between the different houses, the gross value added being the highest for G. D. Naidu followed by Seshasayee, Thapar and Mahindra, while those of the largest houses—Tata and Birla—are lower. The corporate sector as a whole shows a slow rate of expansion after the recession indicating lagging capital investment. The income or wealth generating capacity of equity investment is high in non-traditional multiproduct industries like diversified, automobiles, man made fibres, cement and in single product chemical industries. Shipping, paper and man made fibre have performed uniformly well even in the recession period, and while diversified, automobiles and engineering made a quick recovery, aluminium, cotton textiles and cement made only a partial recovery after the recession. The corporate sector represented by this sample is not expanding fast since the recession and a considerable part of its growth is the result of rising prices rather than rising production or assets as the private sector reports in Vols. II and III of the Bulletin indicate. Both gross and net profitability of these houses are higher in the case of non-traditionals and it is these which must make an increased contribution to the export target for the Fifth Plan.

Steel: December saw a worsening of steel production due to the combined effect of power shortage and the non-availability of coal and coke. The Union Planning Commission's estimate of achievement of 7.2 million tonnes is an over-estimate. The production is likely to be 6.5 million tonnes. In the three HSL plants, Bhilai, Rourkela and Durgapur production has gone down by 25 per cent. Since December 1, there was breakdown in coal supplies from the Jharia coal field due to lack of wagons from Dhanbad. Both production and despatches had been affected by railway strikes on Western, Northern and South Eastern Railway. The shortfalls in production during the first five months of the year were 12 per cent in ingots, 19 per cent in saleable steel, 27 per cent in alloy. For the first 8 months April-November, ingot steel production was 4.5 lakh tonnes short of the target and saleable steel 4.2 lakh tonnes. The total loss is 7 lakh tonnes. TISCO has suffered the most serious loss due to irregular transport and lack of power and coal. In this period, its loss was 2.2 lakh tonnes valued at Rs. 25 crores in relation to its target. In 1972-73 it produced 85-97 per cent of its capacity (See Vol. III page 328) and on this basis it set itself the target of 1.93 million tonnes of ingot. But its coal supplies for the first 8 months were 1.2 million tonnes against a 1.5 million tonnes requirement and its coke supplies were 14,000 tonnes less than its monthly needs. Power supply from DVC was limited and erratic and the transport breakdown meant its supplies were not regular. In this situation the mini-steel plants, which have a capacity of 1.6 million tonnes and which will be expanded to 2.6 million tonnes by the end of the year, must be encouraged to produce upto capacity. Their raw material, ferrous scrap, is in short supply and there are problems of availability, quality and price in importing scrap, which have led the government to limit the expansion of mini-steel plants (See last issue Vol. IV page 17). In place, continuous casting plants are being encouraged on the basis of using indigenous raw material. Bhilai and Bokaro are being provided with captive power plants—Bhilai a 120 MW unit and Bokaro a 200 MW unit. In 3 years BHEL will be installing the generators in the 2 plants and making them independent in their power supply. At the end of December, the Union Cabinet decided to authorise further expansion of Bokaro, from 4.75 million tonnes to 10 million tonnes in stages. The expansion to 5.5 million tonnes is now underway. Bokaro also at the same time rolled out its first steel ingot from its first 100 tonne converter. The Retention Price Committee chaired by the Chairman of the Bureau of Industrial Costs and Prices has in its first report recommended that steel manufacturers be allowed a return of 11.5 per cent on their equity capital. In its final report expected early in February it will recommend prices which will ensure a fair return to the plants, taking into account their production pattern. The dual price (See Vol. III page 785 and the last issue, Vol. IV page 17) has reduced the open market trading to 20 per cent according to the Chairman of SAIL and added around Rs. 100 crores to manufacturers' income. The distribution of steel to small scale industries is under review and a new, more effective and equitable system is being discussed with FASI. It is hoped that such a system so badly needed by small industries, will this time be given effect to. The Union Government has also decided to make Bhilai, Rourkela and Durgapur independent companies reporting directly to SAIL, leaving the function and future of HSL to be decided later. The effective functioning of the steel plants is for the Country a matter of urgency, as international steel prices have doubled in the last

2 years as well as the cost of importing steel prices have doubled in the last 2 years and the cost of importing steel (as we have been doing at the rate of 1 million tonnes a year) is prohibitive at Rs. 250 crores. The supply of coal and proper railway servicing to this sector must be assured.

Crude: December witnessed a very serious situation in crude imports into this Country. The gulf countries decided in the third week of December to double the price of crude—from $ 6 to $ 11.651 per barrel for light Arabian crude. This means that for the 16 million tonnes which the Country imports, the foreign exchange will double from Rs. 500 crores to Rs. 1,000 crores, which is exactly 50 per cent of the Country's export earnings. There will be some further increase in crude prices in the Country but this will not be much, if the excise element is not raised. Petrol and diesel will have to go up by 30 to 35 paise per litre and furnace oil and lubricants by 20 to 25 paise to compensate the price doubling. For Kerosene the increase will be 6-7 paise per litre. The real problem is the enormous foreign exchange drain involved. This means that we must cut back on crude imports, reduce internal consumption, turn to other energy sources, particularly coal which we have in abundance and which we do not seem able to get out of the ground and increase internal crude production. We should also revise our Fifth Plan targets of crude use and imports to keep them within manageable proportions. The other development was that the Arab oil producing countries decided on December 25 to (a) increase their January production by 10 per cent in relation to their October (pre-war) output, instead of increasing the reduction by 5 per cent which would have made the cut 30 per cent, (b) export oil to friendly countries according to their needs and admitted Japan to the list of such countries. This has been a small relief to the industrialised countries except U.S. and Holland which are still under the ban. As far as this Country is concerned, the import position is not clear. As at December, the 3 foreign companies shortfall in importation was 1,945,000 tonnes. The government stated that it had made arrangements with Basrah in Iraq and Rostam in Iran to import 140,000 tonnes of crude. The supplies may be available but as far as price is concerned all the conntries—Iraq, Iran, Saudi Arabia are asking for double the price. Iran introduced the auction system to determine the price and the bid went upto $ 17 a barrel. Meanwhile the government is offering ships bunkering in Indian ports furnace oil to the next port of call only and at double the old prices. Similar restrictions are being imposed on foreign aircraft landing in Indian airports. Petrol rationing will have to be introduced, though petrol constitutes a small proportion of crude and its various products. A reduction in petroleum consumption can be used to increase naphtha supplies for fertilisers. The Country cannot afford to import the 17 million tonnes planned for next year at the new doubled prices. There must be a cut in imports. Industrial plants should switch over from furnace oil to coal in view of the uncertain supply position and rise in costs. Similarly all possible saving in HSD and LPG should be effected by switch over to alternative fuels. The Union Ministry of Petroleum has proposed a number of economy measures such as ban on Sunday motoring, a five day week, conserving electricity by switching off power during daytime, changes in the pattern of refinery production to produce more fuel oil, petrol, naphtha and reducing other products like bitumen and a further rise of 25 to 35 paise. Meanwhile the exploration and production of crude within the Country needs to be intensified. The delay of over 6 months caused by the Japanese firm in

supplying the offshore drilling platform "Sagar Samrat" and its being fitted with old reconditioned motors has been a limiting factor, because after drilling in H-12-1 it will be used in the Main Bombay High structure and the other five offshore locations. The prospects of finding oil in this location are good in view of the presence of limestone which was identified in December. The government has also decided on the four foreign companies which will do offshore drilling (See Vol.III page 565), calling for a risk capital of $15 millions, with a further investment of $200 million to develop the oil wells. The question to be negotiated is whether the companies are to have 40 per cent of their oil find which they want or 20 per cent which the government wishes to give them. The ministry is also investigating some oil traces in a tube well in Paravakottai in Thanjavur district to see if there are oil reserves in the Cauvery delta area.

Coal : One of the most urgent needs is to increase the production of coal and improve its movement. A crash plan has been developed to increase production from 80 million tonnes to 140 million tonnes by the end of the Fifth Plan. This cannot be just a paper target but must be realised in view of the substitute use of coal in place of crude and its products. To achieve the target, the procedure for approval of projects are being simplified—in place of the present procedures, where the project report is first approved by the Board of Directors, followed by scrutiny of the department of Mines, Bureau of Public Enterprises and the Planning Commission, and followed by review and approval of PIB. Under the new procedure, the project will be approved by PIB and sent to the cabinet for decision, involving a two week processing. CMA will have a strengthened mining advisory cell to guide the projects, and the import of coal mining machinery will be given priority in foreign exchange allocations. Machinery for opencast and underground mines has been standardised to expedite placing orders. Also dual pricing will soon go into effect with a lower price for domestic consumers and a higher one for industrial use. This should not increase prices of finished goods as coal prices form a small part of the total cost of industrial production and coal prices must be raised to cover the increase in wages and D.A., if there is not to be a subsidy burden on the national exchequer. Also railway movement from the pithead to the consuming centres must be improved and assured in place of the present chaotic railway movement and rake situation.

Railway wagons : The railway wagons industry which has a capacity of producing 1,500 units per month is actually producing 1,000 units. The reasons for this low turnout are the inevitable power cut and variations and the price factor. The prices of components and bought outs for wagons had increased 20 to 30 per cent. After study of the price and cost factor, the railway board in December revised wagons prices ranging from 25 to 33 per cent for the various varieties. Industry was satisfied with these price rises and the result should be capacity production. The government proposes to set up a wagon authority to co-ordinate and monitor wagon industry activities and control the production so that it employs its capacity. In the Rs. 2,350 crores outlay for railways in the Fifth Plan, 68 per cent is for wagons, line capacity works and track renewals. Both internal and export demands for wagons are rising continuously and the industry must be geared to meet this demand surge.

Tyres and Tubes : Tyres and Tubes are in serious short supply. In December 1973 the shortage of trucks, rear tractor and off the road tyres and tubes was estimated at

1,08,000. The industry has been asked to work extra shifts on Sundays and holidays and additional capacity to certain units has been authorised to increase output. In addition, 5,000 bus truck tyres are being imported from Sri Lanka and 10,000 tyres from the general currency areas to meet truck and State Road Transport needs. The Fifth Plan target is 13 million tyres in order to meet the demand estimated by 1978-79 to reach 12 million.

Chemicals: The international imbalance between supply and demand for chemical products, particularly benzene and nylon moulding powder, due to the energy crisis, and pollution problems, has sent international chemical prices skyrocketing. As a result the cost of raw materials for the Indian Chemical industry has risen sharply by 50 to 100 per cent, and the depletion of the Country's foreign exchange reserves (See Exports section) involves the cut back in imports. The industry which has been working well below capacity is facing closing down as it cannot take on and/or pass on to the consumers the fantastically high prices. It is now necessary for the government to conserve and build up raw materials for the industry from all possible sources, ban all petro-chemical exports, stop the use of benzene by steel plants and build a buffer stock of raw materials.

Fertilisers: The fertiliser supply-demand gap is widening. The demand as established by the States was 39.28 lakh tonnes for 1973-74. The December FCI conference reduced this to 24.31 lakh tonnes. Against this demand the total availability is 14.75 lakh tonnes (opening stocks 2.17 lakh tonnes, internal production 7.85 lakh tonnes and imports 5.5 lakh tonnes), involving shortfall of 9.56 lakh tonnes. This 39 per cent shortfall will increase because Japan, East Europe and all foreign suppliers have informed the government that they cannot fulfil their contracts in view of the cut in their oil imports. This situation calls for urgent action along five lines. First immediately farmers should be helped to increase fertiliser use efficiency, improve management practices such as timely weed control, drainage, plant protection, use of secondary and micro nutrients and timely operations in raising different crops. Particularly in our major farm areas—dry land farming—judicious and economic use of fertilisers should be practised. The use of local organic measures and development of composits for agricultural use and work by ICAR and the agricultural universities to undertake micro level analysis to relate fertiliser use to different soil conditions are further actions to be taken. It is good that the government has waived the entire excise duty on fuel oil which is used as feedstock in fertiliser production and has raised urea prices to increase its profitability. Further the Kalol and Namrup plants are being based on natural gas and Haldia, Anangal and Sindri will use petroleum fractions. The Ramagundam, Talcher and Korba fertiliser plants will use non-coking coal. Priority in use of fertilisers this year and the Fifth Plan will have to be given to HYV which should be done in such a way as not to widen rural disparities.

Newsprint and paper: 1973 was a year of shortage and crisis with regard to newsprint. The world scramble for newsprint arose out of the decision of the developed countries not to increase newsprint and paper production at the cost of their forests and their increasing use of newsprint. The year ended with a serious shortage in supply and a jump in prices. To the 60 percent rise in international newsprint prices that occurred during the year, the Soviet Union quoted $ 431 per tonne (compared to the previous highest

$ 300) for the allotment of 22,000 tonnes contracted for delivery between January-May. Under these conditions the 85 per cent increase of *newsprint* by the public sector NEPA mills in November/December was heartening. For some days production reached 200 tonnes a day from 105 tonnes a day and it has kept up production at 180 tonnes a day without any addition to the existing facilities or capital outlay. Just correcting some processes and improving its electrical and mechanical equipment and preventive maintenance, annual production has been increased to 53,000 tonnes against a rated capacity of 30,000 tonnes. By 1975 June, its expansion programme and the use of a new technology, the cold soda chemical pulping of the Madhya Pradesh forests salai wood and improved machines, will produce 75,000 tonnes per annum. In view of the decrease of forest products for newsprint raw materials, new technologies will have to be developed to use and process agricultural residues like bagasse. The demand for newsprint will rise to 3.5 lakh tonnes during the Fifth Plan and additional capacity of some 4 lakh tonnes will have to be created. In addition to the large plants licensed (See last issue Vol. IV page 22), mini newsprint plants in the small scale sector could be developed to meet the crisis. In view of the shortage of conventional raw materials and the declining future supply of chemicals noted earlier, the paper and board industry should also be further expanded as a fall back of newsprint consumers. Also with the rise in the price of newsprint, white printing paper has become a competitive raw material for newspapers. Paper expansion this year will be over 1.25 lakh tonnes and about 30 per cent of it could be made available to the newspapers, provided its price is controlled and the present blackmarket in paper stocks is eliminated. Here again the small scale sector can contribute to a sizeable increase in paper and paper boards production, particularly the latter. Paper prices have risen and this part of price rise is normal. It is the public sector Hindustan paper corporation's Mandya and Mysore paper mills which have taken the lead in raising prices. In the past 3 years, the cost of production has gone up by Rs. 300 per tonne, but even so Indian paper is Rs. 500 per tonne cheaper than paper in the world market. It is the middlemen and dealers who are indulging in black market prices and this would have to be controlled. Hindustan Paper Corporation has set up paper units in Cachar, Noorgong and Nagaland with an annual capacity of 1.9 lakh tonnes and letters of intent have been given to the State governments of Tripura, Arunachal Pradesh and Manipur for an annual capacity of 2 2 lakh tonnes. For the Fifth Plan a further 5 lakh tonnes capacity must be created of which the private sector should take on 2 lakh tonnes. It is here that small industries can be active. The STC is negotiating long term newsprint contracts with Canada, Scandinavian Countries and Czechoslovakia, to the extent of 35,000 tonnes but the price will be higher than the 1971-72 price of $170 a tonne as noted earlier. Newsprint imports should be speedily unloaded when they arrive and not be subject to the kind of delays as suffered in Madras.

Sugar : Sugar industry had a good year last year with an increase of 19.3 per cent in net sales, a production of 39 lakh tonnes (See Vol. III page 632) and high profits due to sharp rise in wholesale prices. However last year closed with a carry over of 6 lakh tonnes only compared to 14.1 lakh tonnes of the previous year. Exports also were high at 2.5 lakh tonnes and the most profitable concerns were Andhra Sugar, Deccan Sugar, Sakthi Sugar, Gobind Sugar and Kothari whose gross *profits* increased

3-4 fold. The industry is viable and doing well but there continue to be wide fluctuations in production and disparities in incomes of growers and producers. Production in October, the first month of the 1973-74 season, for instance, was 65,000 tonnes against 1,04,000 tonnes in October 1972. The offtake of sugar from factories during October 1973 was 3,03,000 tonnes for internal consumption and 20,000 tonnes for exports against about 3,19,000 tonnes and 5,000 tonnes in October 1972. The consumers continue to pay high prices and the distribution system is defective. Whatever may be the decision on the broader question of nationalisation, the immediate need is for a policy of parity between cane prices, sugar prices and prices to the consumers. Here a certain amount of decentralization is necessary.

Heavy Electricals : Heavy Electricals limited (HEL) had a good year in 1973 as in 1972. Production topped Rs. 56 crores compared to Rs. 42 crores in 1971. Its main bottleneck has been raw materials, whose availability should be improved in order to enable full capacity utilisation by 1975. Its profit of Rs. 5 crores for 1972, as against the continuing losses every year adding upto Rs. 51 crores as of 1971-72, is also in part due to the government accepting a moratorium on interest payments on its initial investment of Rs. 50 crores in the plant and a further loan of Rs. 71 crores. The most urgent need now is for the plant to speed up its delivery of generators to the State Electricity Boards. What it supplies is of good quality and comparable to those imported. But the long time it takes to provide the generators is causing the Boards to continue importing equipment. In fact at Korba, Amarkantak, and Sarni, HEL's generators will be supplied with a 48 months delay. In the case of Korba, this has meant that the State has asked the Union government to slow down the schedule of construction of the aluminium plant at Korba, as its power will not be available till 1978. It must speed up its operations also to meet its export orders which at March 1973 stand at Rs. 1 crore.

Electronics : The electronics industry which is growing rapidly and widely and is employment intensive, ranges over the small scale and large scale, private and public sectors. In 1973 the total production of electronics equipment and components amounted to Rs. 206 crores. The slow down in radios demand in 1973 will pick up with the production of AM/FM radios for export and use of intest technology of integrated circuits, which lower costs and prices. T. V. sets produced in 1973 amounted to 50,000. They have been licensed for production to 66 units in both the small sector with a capacity of 1.91 lakh sets and 11 companies in the large sector with a capacity of 1.1 lakh sets. The production of tape recorders was 40,000 in 1973 and its expansion is limited by having to import some components such as tape decks, micro-motors, recording and erase heads. In so far as these are produced within the Country, the production of tapes will expand rapidly to meet the growing domestic and foreign demand. The industry produced 80,000 amplifiers and P.A. systems and 85,000 record players and changers and both these have good export potential. The production of the electronic desk calculator also began in 1973 and capacity in the large sector to produce 36,000 and in the small sector for 48,000 has been authorised. Also medium size (TDC 12 and TDC-16) and mini computers production has begun and their demand is being estimated. The demand for measuring instruments is growing and it is estimated that 80 units should be active in this field. Medical electronics and industrial control systems-

are areas urgently awaiting development. Export which in 1973 amounted to Rs. 5 crores also should expand rapidly—particularly for radios, amplifiers, tele-communications and data processing equipment and components. The export zone at Santa Cruz alone will be producing export goods for Rs. 50 crores.

Agricultural production: Agricultural production for the Kharif season is satisfactory as pointed out in the last two issues (Vol. III pages 790-792 and Vol. IV pages 23-24). By mid December 1973, market arrivals of over 32 lakh tonnes was 17 per cent higher than in 1972 Kharif of 12.95 lakh tonnes, of which 1.45 lakh tonnes were coarse grains procured by public agencies compared to 6.41 lakh tonnes last year. Procurement in Punjab (5.21 lakh tonnes). Haryana (1.85 lakh tonnes) and Tamil Nadu where procurement was not completed by December had exceeded their targets. In Andhra Pradesh and Orissa procurement had just started. The rabi crop planning is aimed at 480 lakh tonnes of which 80 lakhs are to be procured, which if realised will obviate the importing of wheat. The problem for the rabi crop is fertilisers. Against the last rabi season consumption of 27 lakh tonnes, the State's demand this year is for 53 lakh tonnes which the zonal conference reduced to 39 lakh tonnes. Arrangements have been made for 33 lakh tonnes with a shortfall of 6 lakh tonnes. Even this estimate is based on the assumption that the oil crisis will not reduce imports this year but only from next year. But as noted earlier, many of the supplying countries have told the government that they will not be able to meet their contractual arrangements. This will have to be more precisely computed and allowed for. The rise in shipping freights is another limiting element in the import cost of fertilisers. The food subsidy burden on the other hand will be within the Rs. 250 crores provided for in the budget. In the supplementary demands passed by Lok Sabha in December, Rs. 121 crores was for food subsidy against the original budget estimate of Rs. 130 crores, because of the raising of issue prices. The subsidy is the difference between the issue prices (See Vol. III pages 699 and 799) and the cost to FCI. The subsidy works out to Rs. 56.13 per quintal in the case of imported wheat and is on the higher offtake of 10.49 million tonnes against the estimated 8.7 million tonnes. The other factor which has kept the food subsidy low is the 2 million tonnes Soviet wheat loan (See Vol. III page 790). of which 4 lakh tonnes is being distributed by March 1974 and whose proceeds accrue to the government which does not have to pay now for the loan. This reduction in government subsidy amounting this year to Rs. 50 crores will be much larger for 1974-75 when the remaining 1.5 million tonnes will be distributed and its sales used to reduce the subsidy on internal wheat procurement. Of course the burden of repayment will have to be faced from 1976 over the following 5 years. The farm machinery sector is in not too good a shape. Against the Fourth Plan demand estimate of 80,000 tractors per year, that amount of capacity was created but only 30,000 has been in demand. Against a demand estimate of 400 combine harvesters rising to 2,000 in 1972-73, the 600 tractor driven harvester combine company established in Bangalore produced a Rs. 30,000 harvester which is 1/4 the cost of manual harvesting and a grain loss of less than 5 per cent (compared to 10 per cent loss from manual harvesting). Again the demand for this cheap harvester fell last year leaving the Rs. 25 lakh company with Rs. 75 lakh stocks. In the midst of this slump, the government's import of 200 mammoth harvesters, each costing Rs. 2

lakhs arrived and a further 300 was ordered, deepening the Bangalore firm's crisis. The irony of this situation is that the Bangalore harvester harvests 1 acre of wheat per day, whereas the 7 times more costly imported ones harvest 3 acres per day. As harvesting lasts only 22 days in the year, there is no case for a large harvester unless there are giant farms as in the US, which our land ceilings make impossible. Under these circumstances, a policy is needed to save the nascent agricultural machinery sector which should, inter alia, include subsidising the export of the machinery, stocking all agro-industries corporations and service centres with harvesters, power tillers, tractors etc. for custom-hiring, banning import of agricultural machinery which can be produced within the Country, providing easy credit conditions on margin money, guarantees, repayment schedules, loan limits and procedures for purchase of machinery and established or proposed land policies.

Exports : The Export performance for the first half of the year was good and continuing the improvement analysed in the last issue (Vol. IV pages 24 – 25). For the period April-September 1973, exports totalled Rs. 1,090.1 crores, registering an increase of 17.5 per cent or Rs. 163.29 crores over the first six months of 1972. This had led the Ministry of Commerce to revise upward the year's export target from Rs. 2,072 crores (See Vol. III page 634) to Rs. 2,140 crores. The main increases are expected from jute goods (Rs. 235 crores against the target of Rs. 215 crores), oil cakes (Rs. 125 crores against Rs. 90 crores target) and sugar (Rs. 42 crores against the target of Rs. 30 crores). A second element is that there is a continuous rise in the unit value of our exports caused by the international price inflation. A kg of tea has risen from Rs. 7.54 in 1971-72 to Rs. 8 in the first half of this year, coffee from Rs. 6,182.10 per tonne to Rs. 8,159.36 per tonne, tobacco from Rs. 7,373.47 per tonne to Rs. 10,909.10 per tonne, jute manufactures from Rs. 3,953.50 per tonne to Rs. 4,053.40, oil cakes from Rs. 541.32 per tonne to Rs. 1,331.50, cashew kernel from Rs. 10,153.97 per tonne to Rs. 11.250, spices from Rs. 5,591.96 per tonne to Rs. 7,480.77 and iron ore from Rs. 52.61 per tonne to Rs. 70.67 per tonne. Basic chemicals exports stand at Rs. 40.99 crores for the first eight months compared to Rs. 24.23 crores in the same period last year. Drug exports have increased by 67 per cent in the first six months of 1973–74 at Rs. 343.37 lakhs compared to Rs. 190.22 lakhs for the corresponding period of last year, with the certainty that the year's target of Rs. 501 lakhs will be exceeded. Exports of mill made cotton textiles earned Rs. 24.46 crores, with particular export increases in piecegoods, apparel and yarn particularly to US, UK, Soviet Union and Africa. Engineering goods exports rose by 15 per cent from Rs. 62.3 of the first six months of last year to Rs. 72.9 crores during that period this year particularly in industrial machinery, railway wagons and coaches, MS pipes, bicycles, electric motors, electronics, steel products etc. But the export promotion council expects a shortfall of Rs. 20 crores againts the year's target of Rs. 200 crores as seen in exports rising by 15 per cent during the first six month period against the target rise of 32 per cent because of the expansion and diversification government policy, the export obligation placed on large houses, the recent price increases in steel and pig iron and shortage of shipping space and congestion at all ports. In fact lack of shipping tonnage has wide ranging effects. At last, most of the Yugoslav wagons shipment is ready (See last issue, Vol. IV page 25) with Texmaco about achieving its monthly target of 300 wagons. Because of the small shipping space

made available by Indian shipping lines, charter shipment of 100 wagons was arranged but even so a case of 1,300 covered wagons out of the total contract of 3,600 has piled up in the docks. The Yugoslav demand is for covered wagons as they have a sufficiency of open wagons but the contract to export the covered wagons seems likely to founder this time on the lack of shipping space. In fact the end November India–Pakistan Middle East Shipping Conference which increased freight rates, port congestion and bunker fuel charges from December 1 will sharply reduce India's trade with West Asia, with congestion charges which Indian ships will have to pay for the first time in Beirut at 35 per cent, Latakia at 20 per cent, Famagusta at 20 per cent, Tripoli at 10 per cent and Istanbul at 10 per cent. On top of this are the increases in freight rates and bunker surcharges, MMTC has signed a Rs. 13 crores contract with Rumania to export 21.1 million tonnes of iron ore in addition to the 6 lakh tonnes to be exported by March 1974. Another good export prospect is in fine wool and woolen products on the basis of the current programme of pasture reclamation and sheep cross breeding which will increase wool production per animal by 50 to 100 per cent. By the end of the Fifth Plan, the Country should be an exporter of this item. The foreign exchange reserves of the Country are however not in a sound position. The pressure on it of crude imports has been referred to earlier. In addition the counterpart to the increase in export earnings due to world inflation is the increase in import prices. Further, the wheat imports last year and this year have had a depressing effect. As of mid September 1973, the foreign exchange reserves have fallen by Rs. 100 crores. There must be careful management of imports to prevent further erosion of the reserves. As forecast in the last issue (Vol. IV. page 24), India and ECM signed a five year commerical co-operation agreement on December 17. The agreement provides for a joint commission to plan on a long term and rational basis trade exchanges between India and the ECM countries based on their complementarities and the need for diversification of the goods exchanged. It is authorised to correct tariff barriers, non-tariff and semi-tariff restrictions, imbalances and promote the adaptation of appropriate trade patterns and marketing structures. It has special responsibility for overseeing implementation of the agreements with India on jute, coir, cotton textiles and handloom fabrics and provides for exchange of information on all subjects of economic co-operation. This agreement which is the first of ECM with a non-associate country has broader significance for the third world which can now establish similar arrangement with the Community. The Community is the World's largest trading block, sharing 40 per cent of world trade, importing from India 20 per cent of her total imports. At the meetings of the joint commission from January, India can obtain tariff concessions on a few more articles, help the Community to review and improve its GSP and enlarge its scope to expand trade and economic co-operation between India and the ECM countries. The agreement will also make possible joint Indo-ECM ventures to meet the needs of the third world and for India to specialise in export of labour intensive items. As an immediate effect, the 5 per cent duty on Indian packaged tea will be abolished which calls for the Country expanding its blending and packaging facilities. Also cotton texiles and hand-looms will enter the community markets tax free in addition to the duty free entry of jute and coir and 23 million units of tobacco to the UK for another year. The Indian jute concessions are important in light

of the higher cost of synthetic alternatives due to the oil price rise. The agreement is an important one, the best under the circumstances discussed at length in issues of Vol. III of the Bulletin and calls for promotional action by industrial and trade circles in this Country to catch up with other associate countries which have long enjoyed similar arrangements.

Aid : The Indo-US PL 480 agreement initialled on December 13 was a further major achievement in the economic relations between the two countries. Under the agreement which has to be ratified by the US Congress and the Indian government, India will attribute Rs. 1,644 crores of PL 480 funds to various development projects. This money has been already collected from the consumers by the Indian government long ago when PL 480 goods were sold and used by the government. This is simply a book adjustment but represents a generous waiving of a debt owed by the government of India to the US government. The non PL 480 funds amounting to Rs. 833 crores will be interest free and Rs. 389 crores of it will be maintained in value for 10 years and 1/10 of it will be written off each year. Another Rs. 50 crores will be converted into dollars for use by the embassy, including development of Indian markets for US goods. The remaining non PL 480 funds will be for use by the US embassy in consultation with the government of India. The agreement also provides for financing US aid to Nepal upto Rs. 650 lakhs a year. The US will buy from India in addition to Indian exports to US, annually $100 million of goods of which $75 million will be paid in dollars and the rest in US held rupees. When the US Congress ratifies this agreement, it will constitute a generous help to India and the Indian government and people acknowledge their gratitude for the co-operation and aid it represents. During December on the occasion of the visit of Mr. Husak of Czechoslovakia to India, an agreement was concluded extending a credit of Rs. 80 crores to India for the purchase of complete plants and equipment, particularly machine tools and tractors. In HEC and BHEL R & D co-operation will be intensified under the agreement. The loan will be repaid in 12 years in the case of equipment (Rs. 50 crores) and 10 years in the case of components (Rs. 30 crores) at 2½ per cent interest. Also the agreement provides for a doubling of the trade between the two countries to Rs. 150 crores and an increase in the supply of newsprint over the 7,000 tonnes produced. The Soviet Union has agreed to supply India with power generating equipment worth Rs. 100 crores, mining machinery for Rs. 50 crores and strategic non-ferrous metals during the Fifth Plan period in an agreement signed in December. Also in December, Hungary has agreed to large supplies of rolled steel products as part of a 30 per cent increase in trade at Rs. 78 crores for 1974-75, including imports into India of chemicals and machinery.

International :

Bangla Desh: Indo-Bangla Desh discussion and agreement on jute cover two areas. First an expression of the mutual interest in jute of the two countries, India's Fifth Plan aims at an increase of jute goods production from 12 lakh tonnes to 15 lakh tonnes which calls for 90 lakh bales of raw jute. If There is an assured supply of raw jute from Bangla Desh, India could slow down its expansion of jute cultivation and convert it to rice production. Bangla Desh has provided for an export of 13 lakh bales to India by 1978-79 in its first Five Year Plan. For this year 6 lakh bales are to be imported at an agreed price. This complementarity must be worked out on the basis of agreed jute prices. Jute is Bangla

Desh's major and in fact for the moment only foreign exchange earner with which to pay for its food and other essential goods imports and so the jute price is important. For India also the jute price paid to Bangla Desh must be related to the price paid to the Indian grower if the price support mechanism is to function effectively. A fair price formula must be worked out bearing these factors in mind. The second area is a common strategy for overseas jute sales. A study by a joint team has recommended that this should consist of reducing artificial restraints and incentives in both countries, some specialisation by each country such as Bangla Desh supplying the additional raw jute India needs and both countries working jointly on reducing the cost of production, an appropriate export price policy for jute products to maximise overseas sales, the banning of additional capacity for jute goods except in relation to expansion of overseas demand, joint R & D and market studies regarding raw jute and jute goods and possibly the creation of a jute international to avoid competition among jute producing countries. A more important and long term problem is to place India-Bangla Desh trade on a stable and mutually advantageous footing to both countries. On the one hand the trading pattern should not make Bangla Desh a supplier of raw materials to Indian Industry and on the other India cannot continue to supply Bangla Desh goods of which it is in short supply. From this point of view, the first 2 years' trade between the 2 countries has little to suggest regarding such a rational, just and optimum trade pattern between the 2 countries. Bangla Desh's supply of raw jute and newsprint to India cannot be a permanent feature as they are important foreign exchange earners to that Country—except in relation to equally important imports from India. The first 2 years 1971-73 export of Rs. 200 crores to Bangla Desh was largely in the nature of relief and not really trade. Most of it was on the basis of the Rs. 200 crores aid given by India. In 1971-72 the exports were Rs. 42.34 crores and in 1972-73 they were Rs. 157.18 crores—a total exactly equal to India's grant of Rs. 200 crores aid and credit. (Statistics on imports from Bangla Desh are not readily available to check how much was trade). On the face of it, Bangla Desh appears as the fifth largest importer of Indian goods-after USSR, US, Japan and UK. Apart from most of the exports to Bangla Desh being financed from Indian aid or export credits, the composition of the exports show not a trade but relief pattern. 42 per cent of exports in 1972–73 were accounted for by the wheat shipments of 6.6 lakh tonnes, and if pulses, milk powder and oil were added, it would amount to Rs. 72 crores or 45 per cent of the exports. Crude and petroleum products exports which are in short supply in India and cannot be repeated, amounted to Rs. 15.62 crores. Similarly mutton, tallow, coal and coke, urea, cotton yarn, cement and steel exports amounted to Rs. 13 crores. Thus only Rs. 57 crores of exports were normal trade sales—tobacco, cotton, automobiles, tractors and textiles. In thus developing a long term trading pattern capital goods exports like equipment and machinery can be made against government or commercial credits, raw materials and finished goods like cement, textiles of the cheaper kind demanded by Bangla Desh, engineering goods and coal can be supplied on a barter basis which has to be worked out by the joint machinery of the two countries to help Bangla Desh avoid drain on its foreign exchange. The joint power board at its December meeting set up 2 joint working groups to prepare a feasibility report for exchange of power between the two countries. The report is to be submitted to the board by April.

World Monetary Reform: There was not much progress in December in World Monetary Reform discussion. Gold continued fluctuating around $ 100 per ounce, there was a slight strengthening of the dollar with the decrease in the US unfavourable trade balance and a weakening of the pound sterling with the large unfavourable trade balance reported by the UK for the third quarter of the year. Monetary reform has taken second place to the oil crisis. Officials who were involved in discussing and detailing the reform plan have had their attention distracted to dealing with the energy crisis and its impact on their economies and the problems posed by the rapid rate of inflation and the measures taken to counter it which together with the oil shortage is threatening their economies with recessionary effects. Japan's growth rate has slowed down. Despite the recent relaxation by the Arab countries of their 30 per cent cut in oil supply to Japan, the government is planning on a 30 per cent cut of its oil supplies which is to 80 per cent handled by the oil majors who follow a policy of cutting supplies to all their customers by a similar percentage. Hence the government has (a) reduced oil and electricity supplies to major industrial consumers by 10 per cent and closed petrol stations on Sundays and (b) passed legislation to ensure oil saving of 15 to 17 per cent by industries. Against the 1973 fiscal year growth target of 10.7 per cent, it is now expected that the growth rate for this year will be 6 per cent, and for next year 1974-75, 3.7 per cent. It forecasts that in the last quarter of this year the growth rate will be zero or negative. This kind of situation has distracted the attention of the affluent countries from the urgencies of world monetary reform. The January ministerial meeting of the group of 20 will not make much headway on its agenda items. One or two rather obvious points of agreement is likely to be reached in time for the July 31, 1974 deadline (See Vol. III page 797). The first is the role of SDRs in the international monetary system both in settling international debts between central banks and the restructuring of the IMF to ensure that it will play its rightful role in supervising the reformed system. It is unlikely on present indications, that despite the hopes expressed in previous issues of the Bulletin, 1974 will witness more progress than this limited 2 point agreement.

Gatt: In December hard negotations continued on the new agreement to regulate world trade in textiles, as analysed in the last issue of the Bulletin (Vol. IV. page 28). On the one side are India, Pakistan, Hongkong and Japan among the leading textile exporters and on the other side are some 35 industrialised countries involved in the bargaining to draft a GATT accord on international trade in cotton, wool and man-made fibres. The existing agreement expired at the end of 1973 and covered only cotton textiles. The major issues in reaching agreement on the 22 page draft prepared by the GATT secretariat were outlined in the last issue. They centre around the desire of the exporting countries to enter the markets of the affluent countries in a large manner and the fear of the latter that this may lead to disruption of their domestic textile industry and aggravate their unemployment situation. On December 29, the world textile accord was concluded between the major textile producing and importing countries. Under the agreement there will be a gradual reduction of import limitations from April 1 over a period of 3 years. Import restrictions continuing beyond this period will have to be justified to a 9 man Standing Group which will be monitoring the implementation of the agreement. The agreement which covers the entire range of textiles—cotton, wool and man-made fibres

replaced the 1962 cotton textiles agreement and became effective on January 1, 1974 for a period of 4 years, It was signed by 50 countries, including US, all Western European countries, Japan, India, Pakistan, Hongkong, Brazil and Egypt. This is an important gain in freeing textiles trade from restrictions and will be of help to the producing countries.

World Agriculture : Further to the plan to hold a world food conference analysed in the last issue of the Bulletin (Vol. IV page 29) and the current state and further forecast of agricultural production, the U.N. Food and Agricultural Organisaion has decided to develop a world strategy to bring about greater harmony between the supply of and demand for agricultural goods and improved and enlarged trade in them. The strategy will cover: (a) measures to ensure a quicker and more stable rate of growth of agricultural production particularly in developing countries to meet their growing demand (b) a better balance between world supply and demand for agricultural products to ensure greater stability in food and non-food stocks, (c) an orderly and continuing expansion of trade and (d) ensuring an increasing share in this world agricultural trade for the developing countries so that they can attain their second development decade targets. If through this strategy the affluent countries can be induced to modify even a little their current agricultural policies which are a function of just their short term national interests, this programme will represent for the thrid world a marked step forward in higher rates of agricultural production, greater security of food stocks and a large sharer in the international agricultural trade for them.

World cotton : The US Department of Agriculture's survey of the World Cotton situation is heartening, For the 1973-74 season, world cotton production is estimated at 59.9 million bales which was a 6 lakhs bales increase over the previous year due to a good Soviet and Chinese cotton crop balanced by a 13.2 million bales decline on the US crop. Among countries which had a larger cotton crop are India, Iran, East Africa, Sudan and Central America while besides the US, Mexico, Brazil, Turkey and Pakistan registered decrease. Second in spite of higher prices, cotton consumption will rise to 58.2 million bales, which is 1.5 million bales over that of the last season. While US consumption is expected to decline, that of other countries—communist and non-communist is expected to increase by 2 and 6 per cent respectively. The World Cotton trade is expected to be at the same level as last year's at 20.6 million bales with US exports rising by 7 lakh bales to 6 million. Finally world stocks of cotton will improve at 23 million bales compared to 21.1 million bales last year, with about equal division of the shares as between exporting and importing countries.

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II Agricultural Development

Paddy :

While November had been a dry month (See last issue Vol. IV pages 30 and 31), December saw very heavy rains both in the middle and end of the month. This rain was not good for the early Samba crop which was ready for harvest at the end of December and early January. On the other hand it assured a good thaladi crop over the four lakh acres where it is grown. Because of the heavy rains, the Mettur drawals were restricted, though the inflow was at that time also rather poor. From mid December the government reimposed restriction on the movement of paddy and a uniform levy of 25 per cent was imposed on all purchase and movement of paddy by traders in order to build a large buffer stock and assure steady supplies to the fair price shops in the lean season. For the purpose of the restriction of paddy movements, the State has been divided into 10 areas: (1) Thanjavur district and 44 enclave villages of Alangudi Taluk, (2) South Arcot District, (3) North Arcot, Madras, Chingleput, Salem, Dharmapuri and 6 taluks in Tiruchi District (4) the districts of Ramanathapuram, Tirunelveli except 3 taluks, Madurai except 3 taluks, Coimbatore except 5 taluks and 6 taluks of Tiruchi, (5) Palladam and Udumalpet, (6) Gudalur and Masinikudi taluks, (7) Coonoor and Ootacamund taluks, (8) Pollachi taluk, (9) Avinashi and Coimbatore taluks and (10) Ambasamudram, Tenkasi and Shencottah taluks. The effects of this control of movements can be assessed in the next issue.

Fertilisers :

The shortfall in fertilisers in the Country has been analysed earlier in the section, National, (page 118). Paddy cultivation in the State is seriously hampered by the shortage. The overall need in this State for the rabi season is estimated at 1,06,000 tonnes of nitrogen, and for which the Union government had by December 1973 allocated only 43,678 tonnes. For December alone 60,000 tonnes of nitrogen was needed. The problem that the farmer faces is the double one of high prices and non-availability of stocks even at the high price. In Thanjavur, the primary IADP area, urea is selling at Rs. 125 per bag of 50 kilos against the normal price of Rs. 50.50 per bag. In Tiruchi and Ramanathapuram fertilisers are selling at 150-200 per cent their normal price. In the other paddy producing districts of North and South Arcot, ammonium sulphate and urea are selling at Rs. 120 per bag, which is Rs. 70 more than last year's price. In Tirunelveli the prices are double. On top of this, even at these abnormally high prices, urea and nitrogenous phosphates are not available. Even fertiliser mixtures which were not scarce are now in short supply. Under these conditions, there are 3 actions called for, on two of which the government is acting. First fertilisers should be rationed and distributed effectively. HYV farmers have now been issued ration cards on the basis of certificates from village officials and extension officers, and even so the co-operative societies are able to supply only one fourth of the authorised quota. The result is the usual black market in permits, cards and fertilisers which needs to be suppressed but this can be done primarily through adequate supplies. Second is to train agricultural officers in economical use of fertilisers by farmers. In the November/December training programme organised by the Department of Agriculture, paddy varieties which need only medium fertiliser doses were propagated. These varieties are Bhavani, Ponni, Kanchi, Karuna, Anna-

poorni and Triveni, Further two lakh flasks of Rhizobia are being distributed to the farmers to step up pulse production. On the other hand potassic and phosphatic fertilisers are being soft pedalled in areas where large doses are required. Third research into means of reducing fertiliser application needs to be intensified. This involves uses of compost, improved timing of fertiliser application and crop management so that the same amount can go further. These conditions apply also to pesticides-particularly BHC and DDT-which are in short supply. Here pesticides should be used only where they are effective. They must be supplemented and even replaced by further development of pest resistant strains and other prophylactic action. The fertiliser shortage has long term and short term causes. In the short term, with the resumption of full production of Madras Fertilisers and the oil firing of two generators in Neyveli, the supply of fertilisers to the State should be increased. Its effective distribution to paddy growers should then be ensured.

Multiple Cropping:

It is with regret that the December announcement is noted of the discontinuance of the multiple cropping programme in operation in Pattukotti, Musiri and Cuddalore. The programme was training farmers in raising 2 or 3 crops in succession on a unit of land and had multiple consequences on output, income and employment. This is one of those cases which sustains the thesis that in agriculture as in other areas that are the responsibility of the States, the Union government should limit itself to advice, guidance, standard setting and in some cases evaluation and not enter the operational field. When it does, it harms both the Union and State governments and the interests of the people suffer. This programme was designed and operated only because its cost of Rs. 4 lakhs per annum was available from the Union government. When that grant ceased with the Fourth Plan, the programme has been scrapped.

Dry Farming:

State is intensifying its programme of dry land farming on which most of the farmers make their living. Drought resistant and high yielding crops are being promoted with a view both to increase the income of these farmers who live and work the lands in the State's backward areas (thus executing the Plan's priority obligation for the development of backward areas) and to increase the quantity of food and non-food yield in the State. The results of the dry lands research of the Koilpatti Research Centre in the form of extensive cultivation of sunflower, hybrid cholam, Cholam (CSH-5), cumbu, ragi and ground-nut. The resources for this programme include the results of the All India co-ordinated Research Project on dry land agriculture launched in 1970 which have made available techniques of better moisture conservation, improved cropping pattern, life saving for crops under stress and midseason correction resulting from weather changes. For the Country, 100 million hectares out of the total 128 million hectares are under dry land farming, producing 42 per cent of the Country's foodgrains. With the new techniques and programme there can be avoidance of total or even serious crop failures. The National Commission on Agriculture is now planning a Drought Code to help development administrators and Departments of agriculture to handle weather problems and uncertainties as they affect the year's crop, taking anticipatory and preventive action before rather than relief action after the damage. The results of the enormous amount of dry land research undertaken in this State, Country and other Countries will provide the guidelines for the Code.

Research Results:

With water scarcity, economy in irrigation and techniques of recharging dry wells assume importance. The amount of wastage in our irrigation methods has been referred to in past issues (e.g. Vol. III pages 567–568). Research now has established the fact that crop production is increased with some interval in the application of water to the sown land or crop. A properly timed interval between one wetting and the next achieves both economy in water use and an increase in yield. A further development is to irrigate continuously but with not more than 0.5 to 1.0 mm of water. This controlled irrigation about doubles the yield. But the use of this method requires an educated peasantry and even more requires the kind of porous plastic tubes that can ensure controlled and continuous wetting of the soil. The other development is the Tamil Nadu Agricultural University's revitalisation technique for increasing the water in drying wells. The technique involves puncturing contiguous water bearing fissures in or near the well. A number of small diameter holes are drilled horizontally or vertically in the open wells using drills, feeds and extensions. It costs the farmer Rs. 4 per foot and for upto an 80 feet hole, the total charges are Rs. 20 per day for one or two days. This method opens up vistas for farmers in semi-dry areas using limited quantities of water. Another result thrown up by the All India co-ordinated project on Bajra is the means of countering its diseases such as mildew, smut and the more deadly ergot. The ergot disease can now be avoided by use of Ziam or Thiram at the bark leaf stage and by salt water after threshing. Further the Tamil Nadu Agricultural University released in December two varieties of papayya C0 1 and C0 2 which adds to the horticultural resources of the fruit farmer.

Groundnut:

For this season, groundnut was grown over 7½ lakh acres compared to 6½ lakh acres last year. The Pollachi areas 1 lakh acres has now normal good crop. In parts of Tiruvannamalai, North Arcot, Salem and Coimbatore, the insufficient North-East monsoon affected the crop in the pod formation stage. The dry November however has had one good effect. It prevented all this land under oil seeds cultivation from being turned into Navarai Paddy cultivation.

Cotton:

The cotton crop yield for the season has been good. Along with the credit squeeze, referred to earlier under the section, National, which resulted in the textile mills not being able to hold large cotton stocks, the increased cotton production has resulted in a rather steep fall in cotton prices in Coimbatore and surrounding districts. The HYV MCU-5 cotton which was selling in October 1973 at Rs.700 per podi had fallen to Rs.450 in December.

Tea:

Tea production and the plantation industry are in difficulties and the issues were fully debated at the December National Seminar in New Delhi. Production as pointed out in the last issue (Vol. IV page 34) increased, for the 12 months in 1973, the net increase was 8 million tonnes. South Indian production decreased by 1 million tonnes, otherwise India's production increase would have been 9 million tonnes. Even so India alone contributed more than 50 per cent of the world increase of tea production of 15 million tonnes in 1974. But the problem faced by the industry is the steady decline in its exports. India's tea exports which were 45 percent of the world's total exports

in 1950 declined to about 30 per cent in 1972. This has also been a world trend. While world tea production had during the last decade increased by 100 million kgs reaching 450 million kgs at the end of 1972, exports remained static at 200 million kgs. In addition there has been a continuous decline in tea prices internationally. This has a serious impact on the foreign exchange earnings particularly of other countries who export practically all they produce, while India having a booming domestic market exports only half of what it produces. Even so this decline in India's tea exports which in August 1973 totalled 101.93 million kg. showing a decrease of 15.41 million kgs. over August 1972, is traced to increased world competition, decline in demand from leading buyers in UK, UAR and Sudan by 20 million kgs. and the rising cost of production. The competition from other producing countries, particularly from East Africa, arises from the fact that unlike India their domestic offtake is low and so they offload every ounce of increased production they achieve. It is true that there is a basic imbalance between world supply of and world demand for tea. While tea production is growing at 4 per cent per annum, demand is growing only at 2.8 per cent and this can be countered only by more vigorous promotion of tea consumption within each country. Within this Country, tea consumption is growing fast, at 6.22 compound rate per annum. The second cause namely, decline in the demand of our major foreign consumers is a little complex. While on the one hand UK consumption of Indian tea has fallen, the prices as a whole have not fallen. North Indian tea prices, as noted in the last issue (Vol. IV page 34) rose by 3.48 pence per kg. while South Indian tea prices fell by 0.98 pence per kg. making for a rise of over 1 penny per kg. overall compared to 1972. In the US tea consumption has increased sizeably from 90 million lbs. in 1962 to 140 million lbs in 1972—due primarily to the efforts of the Tea Council of America, consisting of tea marketing firms of that country. The Council's success is remarkable as it achieved this expansion with a small expenditure of $ 15 million on publicity, while on coffee the expenditure was $ 150 million and for soft drinks $300 million. In both US and Japan, the latter emerging as a major consumer of Indian tea, the demand is for "convenience" teas, that is for tea bags and instant tea. It is to these that the Indian tea processor must adapt himself in order to promote exports to these countries. Another area to be developed is green tea which is in much demand in Japan, China and Taiwan. Indian tea production must therefore move in the direction of producing green teas, tea bags and instant teas and in this way tea exports can be on a rising trend and arrest the declining trend. In these countries, the Tea Board should use the private agencies for its promotional programme, as in the case of the Tea Council of America and the three private firms in Japan. With the other consumers—USSR which is growing in importance, Egypt, Sudan, Iraq and Iran—which together buy 25 per cent of our exports, there are no problems and the government and the Tea Board can expand our sales in these countries. The third element is the rising cost of production and the continuing labour troubles in the plantations. The rising costs are due to increase in the cost of inputs and labour and the taxes paid by the estates. The December Seminar has therefore recommended that government should frame a policy in taxation, land and other aspects for the development of tea industry. This means that tea should not be categorised as a traditional export- but made eligible for all the export incen-

tives, that a tea industry council should be set up for government and the planters to consult on all matters affecting the industry and promote its internal consumption and export and that a greater R&D effort should be undertaken. On the investment side, many plantations have had difficulty in raising development funds from the banks and ARC and this will have to be remedied. One estimate is that for the next 15 years, the industry will need Rs.518 crores of investment, which can be met partly internally if the present level of taxes is reduced and partly by the banks investing more adequately in the industry. Finaly there is need for industrial peace in this sector. In the Kerala plantations there was a general strike in December to support the demand for increased wage to compansate rising prices and the scarce supply of foodgrains disruped production. A study of 15 medium tea companies in the South showed that their gross sales rose by 2½ times, the gross profits rose only from Rs. 1,362 to Rs. 1,419 per hectare, and the profit after tax fell from Rs. 969 to Rs.713 per hectare between 1950 and 1970. The cost therefore has risen about four-fold from Rs.2,248 per hectare to Rs 8,246 per hectare. Prices have not kept up with this rise. There is a real prospect of many small plantations in which the South predominates, being closed. The meeting of tea producing countries being called by FAO to agree upon production, export and pricing policies this year is timely and the promise of the government to review the taxes on this sector can afford the industry in this State and country some relief.

Coffee :

As forecast in Vol. III page 801, the 1972-73 season coffee crop was good, with 89,873 tonnes delivered to the coffee board, compared to 68,584 tonnes for the previous year. The export earning which was Rs. 32.93 crores for 1972-73 is expected to reach Rs. 40 crores this year which is a near 6 fold increase since 1960-61, but the actual volume of production increased only 3 fold from 19,689 tonnes in 1960-61, to 60,000 tonnes in 1973-74. The higher export earnings have been mainly due to the rise in prices. India produces only 2 per cent of the world coffee output and accounts for 1 per cent of total coffee exports. The countries to whom the coffee is exported are 10 plus the ECM countries besides UK and the gulf countries besides Iraq and Iran. The 1973 exports to all major exporters including UK, USSR, Sudan, Poland and US show a small decline. However unlike the Tea Plantations, the coffee board, producers and exporters have been able to do a good job helped by the higher international prices which ranged from Rs 415 to Rs. 473 per 50 kg compared to the local prices of Rs. 354.50 to Rs. 405.25. Domestic consumption has been more or less stagnant. It was 34,651 tonnes in 1962, 37,452 in 1972 and for 1973 estimated at 39,000 tonnes. The Board should aim at increasing domestic consumption to 45,000 tonnes, as production averages 1,00,000 tonnes annually. Coffee also faces rising costs and falling profits, from Rs. 4.37 per point in 1969-70 to Rs. 3.52 per point in 1972-73. The Board's development programme referred to in Vol. III page 801, under which the small grower receives a 7 year loan of Rs. 2,250 and a subsidy of Rs. 750 per acre and the large plantations Rs. 2,250 as loan needs to be more fully backed by the banks as well as ARC in order to help this potentially important sector to grow further and provide an adequate pay off for the small planter.

Rubber :

Rubber production has also been expanding, registering a rise of 248 per cent between 1962-63 and 1973-74. The rubber price which was fixed by the Tariff commission in 1970 at Rs. 520 per 100 kg is not received by the large number of small planters in the South. The current controvery between planters and rubber industry users about exporting raw rubber to realise the higher international prices turns on this question. The small planter must be given the statutory price so that he can meet his rising costs.

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III Industrial Development

Salem Steel :

The global tenders for purchasing stainless steel technology are now being answered and examined. The foreign exchange cost for this is Rs. 65 crores which may be financed from aid funds or foreign exchange earnings depending on the tenders. The Fifth Plan provision for all 3 Southern steel plants is Rs. 600 crores.

Concast :

TIDCO's continuous casting plant at Arkonam has had a poor start because of the power cut. Its loss last year was Rs. 76 lakhs and if the 15 per cent cut is continued will be Rs. 20 lakhs this year. Its start of production coincided with the start of the power cut in October 1972, so that its 50,000 capacity was worked at less than 50 per cent. When the 75 per cent cut was on between March and July, it was completely closed down and it has resumed with a 15 per cent cut based on the 50 per cent capacity use before the shut down. The present monthly supply of power is 1.6 million units ; for a plant with an arc furnace of 150 tonnes per day, this supply lasts only for 18 days in a month. Its output is 1,500 tonnes per month against a possible 2,600 tonnes. Further the plant, with an employment of 600 and annual overhead of Rs. 1 crore, has turned out to be 3 times as capital intensive as a scrap based mini-steel plant which it resembles. It is essential that the government exempt concast from any power cut so that its employment and production potential can be fully exploited. It can break even at 2,200 tonnes and there is no reason for working it at a loss. The plan to switch over its product to high carbon steel with a Rs. 4 crore wire rod mill and doubling its capacity to 1,00,000 tonnes in order to make it profitable is sound only if the preconditions are met. First it must be provided with its full requirement of power. Second further expansion should await the firm establishment of reductant technology for sponge iron from iron ore, as otherwise it would simply be adding to the scramble for scrap iron which is in very short supply in the State and the Country.

Neyveli :

The Rs. 36 crore replacement and additional primary equipment to raise lignite production to 6 million tonnes at Neyveli (See Vol. III page 802) will be delivered at the end of 1976 so that the increase in power generation from this expansion can be counted upon from the mid Fifth Plan period. The conversion of

the two 50 MW units to oil firing is going on schedule and the first unit will go into operation from the end of February. The conversion will give the State grid 500 million units for a full year, increasing utilisation of the station to 44 per cent this year and 56 per cent next year. The total loss in the plant to date is Rs. 55.8 crores and its turning the corner will occur when the additional equipment is used to lift 6 million to 6.5 million tonnes of lignite a year.

Kalpakkam and Heavy Water :

The refusal of Canada to supply the components for Kalpakkam and other nuclear energy plants because India has not signed the nuclear non-proliferation treaty and will not bring the Kalpakkam nuclear power reactors under the inspection of the International Atomic Energy Agency, as pointed out in the last issue (Vol. IV page 37), means that (a) Kalppakkam, will not go on steam till 1977, (b) the Country will have to fabricate its own nuclear plants and (c) the equipment for the heavy water plant at Tuticorin (See Vol. I No. 8 page 8) will have to be purchased from France. The Kalpakkam heavy water reactor is based on the Canadian (CANDU) model. Unlike the Tarapur reactor which used enriched uranium for its light water reactor fuel Kalpakkam uses natural uranium available in the Country and is more economical because it does not consume scarce electricity which the enriching of the uranium requires. Now with the expertise available in the Country, an effort must be made to get our industry to produce the calandria, the heat transport pumps and other components of the Kalpakkam plant which require special steels. The first heavy water plant will go into operation at Baroda in May with French equipment and using the ammonia-hydrogen exchange process. The second plant will begin operating this month at Kota using H_2S plus H_2O exchange process and using the steam and power from the Rajasthan atomic plant. The Tuticorin plant will have an annual capacity of 71.3 tonnes and using the same process as the Baroda plant and the equipment from the same French consortium will obtain its oxide of heavy hpdrogen from ammonia at SPIC. The plant will go into operation by the end of 1974 well in time to feed Kalpakkam. The fourth plant is being planned at Talcher with West German collaboration and will go on stream in 1976. These four plants will thus make the Country's nuclear plants self sufficient in heavy water and the low production cost of Rs. 500 per tonne compared to the import price of Rs. 600 will enable some of the supplies to be exported.

Madras Fertilisers :

The Madras Fertilisers Plant (See Vol. III page 807) due to the damage to its rotor and failure of the compressor closed down on November 9 till the end of the year. A spare rotor was installed and the 7 weeks shut down was used to overhaul the entire plant. It started production at the beginning fo the year, operating at 70 per cent of capacity, gradually moving upto full capacity. It has concentrated on urea production because of the serious shortage of phosphoric acid in the State. It is also now moving into the production of complex fertilisers.

Madras Refineries :

The annual report of Madras refineries for the year ending 30th June, 1973 records steady progress. Against a capacity of 2.5 million tonnes, despite a 22 day shut down to overhall the plant, it refined oil upto capacity of 2.5 million tonnes last year, is refining 2.7 million tonnes for this year and will be moving upto 3 million tonnes next year due to some debottle-

necking modifications carried out during the overhaul work. Its fuel consumption was reduced by 10 per cent (saving Rs. 75 lakhs) and all products have been increased—cooking gas by 40 per cent, motor spirit by 14.5 per cent, aviation fuel by 23.5 per cent light diesel by 37.8 per cent and lube by 12.3 per cent. The total value of sales went up by 11 per cent and the freight rate of crude transport reduced by 27.5 per cent. On its foreign loan, $ 1.80 million, and its Rupee loan, Rs 22.5 lakhs have been repaid during the year, leaving a balance of $ 10.02 million and Rs. 106.8 lakhs to be repaid. The net profit was Rs. 570 lakhs (an 11 per cent increase over last year) and a 12 per cent dividend was declared. R & D work on rubber processing and extender oils, ink oils and axle oils has been succssfully completed and import substitution of Rs. 3.5 crores effected. The oil jetty at Bharathi dock at the Madras port opened in February 1973 has enabled the super tankers to berth and discharge their crude to the company. The only uncertainty for this year and the future is the rocketing price of crude. The company has a long term contract with Iran for the supply of 43 million tonnes of crude over a 10 year period. But the doubling of the posted price in Iran will affect the cost of this refinery on which negotiations are to be undertaken by a visiting mission to that Country to settle the price from October, when the present price agreement expires. In fact the Chairman has warned that the international crude prices might make it difficult for the company to continue its profitable functioning.

Ashok Leyland:

Ashok Leyland's current production of 5,000 units a year is to be doubled to 10,000 units by 1978. It has undertaken to supply Maharashtra State Road Transport Corporation 365 passengar vehicles and to BEST, 200 vehicles. It has also decided to reduce its foreign holdings from 58 per cent to 51 per cent by the end of the Fifth Plan.

Small Industries:

Some relief to small industries with regard to coal supply is being arranged by the Department of Industries. The Department is arranging to move 1,000 wagons of coal and 210 wagons of coke every month from the pit heads for distribution to 4,000 small industrialists through a supply card system, based on the average consumption of individual units in the last 2 years. Dealers who have been selling at well above the control prices are now required to sell only to card holders at control prices. To ensure this, consumer co-operatives of small industrialists are being formed for coal distribution in Chingleput, Vellore and Madurai and the dealers are gradually being eliminated. Further to meet their problems arising from the shortage of gas cylinders for oxygen and acetylene, Bharat Pumps and Compressers are importing 50,000 cylinders from their Japanese collaborators and the State has arranged priorities for distribution of the cylinders to the unit. A further serious problem facing the small units is the effect of the bank credit freeze on them referred to earlier under the section, National. Starting at a low level of 8 per cent of total bank credit as at December 1972, and given the increase in the number of units, the lack of credit, the increase in margin requirements and interest rates above 10 per cent are telling on their viability. Representations have been made to the RBI, the commercial banks and the Ministry of finance for some relief to these units. The World Bank—IDA credit of Rs. 18 crores should be used by small units in this State for importing machinery needed by them.

For 1973' the State has received Rs. 6 crores for import of raw materials. This can be increased if the industries are started in backward districts.

Cement and Foundries :

The cement and foundry units in the State face a common problem—the problem of coal supplies. Cement units switched over to oil fuel because of the scarcity of coal. India Cements for instance which needs 2 lakh tonnes of coal a year received 96,000 tonnes in the first 10 months of 1973. Power is now not the problem but coal shortage is resulting in a production loss of 30 to 40 per cent. These units which have switched to oil have had to take on increased costs of Rs. 21 to Rs. 25 per tonne while the cement price is fixed. The foundry units are forced to buy their coal in the open market at a price of Rs. 240-260 per tonne against the landed cost of Rs.90 per tonne. The most urgent and perfectly feasible action for the Coal Authority and the Railway Board is to assure the industries in this State a continuous supply of coal.

Electric Motors :

The electric motor units in this State and the Country face another kind of serious shortage. Their raw materials—dynamo grade steel which has a 10,000 tonnes annual shortfall, pig iron and coke with their high black market prices are forcing units to lay off workers and close down or work well below capacity Here Rourekela should produce somewhat nearer its 24,000 capacity of dynamo grade steel instead of its current 10,000 tonnes and the Coal Authority should lift and make available the coke necessary for these units.

Nylon Project :

The Nylon project in Madurai referred to in Vol III page 350; set up as the Tamil Nadu Synthetic Fibres Ltd. to start the Rs. 12 crores, 2,100 tonnes per annum nylon filament yarn plant in the public sector, has had to be wound up as the Union government's clearance has been delayed and is unlikely to be received with the Fifth Plan priorities, where nylon is rather low in the list. What is to be regretted is that the Union government issued the letters of intent for the project, allowed staff to be recruited who have had to be disbanded and authorised the Japanese collaboration agreement which had been negotiated and must now be put into cold storage. There are two problems left. The State has lost Rs. 6 lakhs over the project. And what must be dealt with is the flourishing black market in nylon yarn which does business to the extent of Rs.15 crores a day. It is necessary for the government to satisfy itself that this demand is from the upper classes and if it is, for it to be suppressed.

Chromates and Chemicals :

The Tamil Nadu Chromates and Chemicals which is sited in SIPCOT's Ranipet complex as a joint sector company has been launched with a capital of Rs. 19.6 lakhs. Its production will begin in 1977 and will meet the growing demand for the basic chemical needed by finished leather manufactures. Its turnover at that time will be Rs. 2.4 crores. Tamil Nadu Chemical products, a joint sector unit of TIDCO is issuing Rs. 66.30 lakhs equity and Rs.25 lakhs preference capital next month. The promoters have provided Rs. 66.30 lakhs to make the totat capital Rs. 1.55 crores. The company's plant for the production of 3,300 tonnes of sodium hydro sulphate with the collaboration of Mitsubishi Gas Chemicals of Japan is to be located at Karaikudi. It will be the first unit outside the US and Japan to use the new technology of sodium formate replacing zink. Hydro sulphate which is

in short supply is needed by the State's handlooms to the extent of 200 tonnes per annum. It is selling at Rs. 20,000 per tonne against the manufacturer's price of Rs. 13,000. It will save the Country Rs. 85 lakhs in foreign exchange.

Sugar:

Sugar production for this year is expected to be higher at 51 lakh tonnes over the 45 lakh tonnes forecast in the last two issues (Vol. III page 786 and Vol. IV page 38 representing an increase of 30 to 35 per cent over the last season's 40 lakh tonnes. The recovery rate is also good and better than that of the last 3 years, with an estimated production of 4.57 lakh tonnes against last year's 3.3 lakh tonnes. The State being surplus in sugar even at last year's production, will be able to export its larger production at current high international prices. The problem that mills face in the State is the railway wagon problem to move all their stocks of levy sugar to West Bengal, Bihar, Madhya Pradesh and Orissa. In response to the demand of the State sugarcane growers for a minimum price of Rs. 125 per tonne to compensate the increased cost of fertilisers and other inputs, the State Government in December repeated its last year's directive that sugar factories in the State should pay an additional interim price of Rs. 5 per tonne above the minimum price fixed by the Union government of Rs. 80 per tonne linked to a recovery of 8.5 per cent, with a premium of 94 paise for every 0.1 per cent increase in recovery over the 8.5 per cent. For most growers this would mean a price of around of Rs. 100 per tonne in this State.

Handlooms and Yarn:

Following the decision of the Supreme Court (See Vol. IV pages 39 and 40) the yarn price and distribution control order was under review and modification by the government. In mid December the Union government relaxed the cotton yarn export control to the UK and other countries, specifying the counts, the quantum, and the time limit for exports. For the UK a quantum of 2 million kg of cotton yarn in single count 17s and below, folded yarn in 17s, of two ply and three plies and above in all counts can be exported against pending contracts and new contracts entered into before December 31, 1974. For other countries five million kg of cotton yarn in the same counts as for the UK are permitted to be exported by March 1974. The mills will be earning a higher income from this export relaxation as overseas yarn prices are higher than the controlled domestic ones. The yarn trade Federation in this State wants this relaxation to be made permanent and in fact wants a percentage of production to be earmarked for exports. Its suggestion that price control and regulated distribution be given up in favour of voluntary control in which it will itself act as distributor cannot be accepted as its promise to supply yarn to the handloom consumer at a fair price has so far not been realised (See Vol. III pages 329, 423-424). At the ISI Congress at Coimbatore, to be referred to later, the urgent need for drawing up specifications for the production of quality handloom goods and functional textile designs was emphasised. For quality handloom products, raw materials and equipment must be made available adequately and on time to the sector. For design improvement, the integration of our excellent traditional designs with modern demands must be promoted. To attain these objectives, a common facility centre for dyeing, design and equipment for the handloom should be set up within this State, as the sector itself is too poor and scattered to have these facilities.

Leather ·

1973 closed with Madras losing its pre-eminent position in the World leather market. Exports were on the decline and in the case of goat skins were around 50 per cent of what they were in the previous year. Within the Country, prices declined for goat skins by 20 to 25 per cent, sheep skins 10 to 20 per cent, and hides 15 to 20 per cent, with a falling demand even at these low prices. The causes for this poor showing have been analysed in earlier issues, the export quotas on April 1 (Vol. III page 353), its reduction by 50 per cent on August 1 (Vol. III pages 647-648) and the equation of wet blues with ET tanned leather, the complex procedures for expanding capacities and issues of import licenses for capital goods that were to be simplified (Vol. III pages 805-806) but were not and above all the still debated non-setting up of the Leather Authority (Vol. III pages 508-509). On the external side, the importers continue to face uncertainties from the exchange rate fluctuations, the anti-inflationary measures being taken by their governments and the consequent tight money policies and high interest rates which prevents stocking and normal inventories of leather goods. The Madras Leather producers also face a 40 to 50 per cent rise in the price of European tanning machinery with an 18 months delivery delay. 1974 however holds out some hopeful signs. With the growing oil crisis and the difficulties faced by the petro-chemical industry, plastic shoes, plastic hand bags, gloves etc. are no longer viable and leather goods are coming more into demand. Further with the slowing down of automobile production in the US and other affluent countries, the demand for footwear is on the increase. It is now necessary for the leather industry in the State to ready itself and with all possible assistance from the Union government to meet the growing demand for finished leather, shoes, handbags etc. as quickly as possible.

Private Sector Reports :

Kothari Madras's annual report for the year ending June 1973 is the record of the second year of the combined operations of various units (See Vol. III page 263). For 10 months ending June 30, the gross profits were Rs. 77 lakhs, with the textiles earning over half the profits. During the year, diversification of machinery and modernisation programmes were underway. The two tereviscose yarn textile mills at Coimbatore and Adoni were readied for operation to start this year. Exports of textiles for the year will be a little above that of the previous year at Rs. 44 lakhs. The record on tea is not encouraging and the report repeats the analysis for the poor showing on tea set forth earlier in this issue. On coffee, the performance is better largely because of the higher international prices. The fertiliser section did well despite the very heavy power cut. In particular, the mixtures were produced at the same level, while straight fertiliser production decreased. The profits in this section was Rs. 4 lakhs. The company reports a diversification programme involving producing caustic soda and wrist watches. The other annual report, that of Kothari Sugars and Chemicals for the year ending June 30, 1973 reports that the Kattur factory crushed 2.24 lakh tonnes of cane and produced 1.97 lakh quintals of sugar which was a 20-30 per cent increase in both over the previous year but with a lower recovery rate of 8.75 per cent against last year's 10.04 per cent (See Vol. III page 191), This fall was due to unfavourable weather which made the State's average recovery 8.33 per cent. The sugar cane price, as per the State government order, was Rs. 100 per tonne For 1973-74, both Kattur and Siruguppa factories will be doubling their

crushing and sugar output with new equipment to expand the capacities of both factories for which bank loans of Rs. 205 lakhs were obtained. The companies plan to install distillaries at both factories so that transport of molasses over long distances can be avoided. The Sakthi Sugar's annual report for the year ending June 1973 reports another year of good performance similar to last year's (See Vol. III page 118). 6.88 lakh tonnes of cane were crushed, a 20 per cent increase over last year at a lower recovery rate of 8.72 per cent compared to last year's 9 52 per cent—for the same reason as given in the Kothari Sugar and Chemical's report. The price given to the growers was Rs. 115 per tonne (as against Rs. 97,90 per tonne fixed by the government) and the two together led to the decline in net profits from last year's Rs. 135.34 lakhs to Rs. 74.99 lakhs. The distillery functioned well and its capacity was increased by 50 per cent to 3 million gallons. The expansion of crushing to 40,000 tonnes daily is reported at a cost of Rs. 255 lakhs, financed internally (Rs. 55 lakhs) and by bank loans (Rs. 200 lakhs). The debt equity ratio is Rs. 6.50 crores : Rs. 3.25 crores. For the year 1974-75, the company has set itself the target of 12 lakh tonnes to be crushed. The yield per acre which has arisen to 43 tonnes per acre from 35 tonnes is to be further raised to 45 tonnes. The expanded distillery also will function next year with higher output. The industrial relations in the company were good and the voluntary health services scheme (See Vol. III page 42) has been functioning to the satisfaction of the workers and the medical staff.

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IV. Education, Science and Health

Unrest in Educational Institutions :

The need for quicker implementation of educational reforms, which has been slow moving, is evidenced from some of the agitations by students. In Delhi about 1,000 students gathered at the Boat Club Lawn to observe a 'Reform Education Day'. The rally demanded in its manifesto a complete switch over to regional language as medium of education, introduction of compulsory rural service for obtaining a degree, restoration of the cut in the Fifth Plan for Education and change in the educational system to achieve secular and socialistic goals. Later 17 students of the National Students Union courted arrest when they were prevented from proceeding to meet the Union Minister in a mass deputation. In Madhya Pradesh there were widespread disturbances in about 10 towns, with the students demanding that the questions in the secondary examination should be limited to the 11th standard portions only. The latest government decision was that the examination would cover the 10th and 11th standard syllabus. The students also opposed a switch over to the three year integrated course from this year. There were disturbances in a number of towns like Gwalior, Dabra, Dithya, Bhind, Raipur, Dewas, Indore and later in Bhopal. Violence included stone throwing at government offices, buses, octroi posts,

and smashing street-lights. The Government yielded to the demands of the students and decided to maintain the statuesque in respect of the higher secondary examination. However, agitation continued in some towns. In Silchar following student demonstration before the Assam Education Minister in support for their demand for the medium of education in the mother tongue in schools, Section 144 Cr. P C. was promulgated, after the students clashed with the police. Police burst tear gas shells to disperse a crowd of Patna and Magadh University students who staged a demonstration at the Assembly gates resorting to stone throwing and setting fire to a petrol pump demonstrating in support of their demand which included holding of examinations in their colleges under the Magadh University. Reasons extraneous to the education system have also led to students taking part in agitations. In Calcutta the youth and student organisations and some political parties stormed the State Secretariat demanding immediate withdrawal of the rise in bus fares The agitators stopped all cars and buses and used them as road blocks. About 3,000 students in Bangalore took out a procession through the main streets of the city to protest against the alleged atrocities on Kannadigas by Maharashtrians ensuring from the Karnataka-Maharashtra border dispute The Bangalore University suspended class work in all colleges under its jurisdiction early in December following a week long agitation by a section of the students against the reported observation of the Municipal Administration Minister on Kannada literature. In this State there were a few incidents, in Madras and the other cities early in December. (See Vol. III page 119 and Vol. IV page 41) Christmas holidays were advanced and all colleges were closed early in the month.

Adult Education :

Evaluation is a necessary complement to any innovative programme. On this basis the Kerala Grandhasala Sanghom which is running an adult literacy programme (See Vol. III page 810) organised a study aiming at finding out the major attitude changes among the neo-literates as a result of the functional literacy programme. As an exploratory study 400 learners in the Trivandrum District were included in the purview A questionnaire was prepared and administered in person to every third learner among the 400 - out of which 120 were physically present. The age level of the interviewed persons ranged from 14 to 42 years and about 77.5% were men, and 65 per cent had no previous schooling. The interview revealed that their incomes ranged Rs. 30 to Rs. 150 per month The result showed that the people were thankful to the organisers of the literacy scheme. They had learnt to write letters to friends, relatives and the government. Those who were at work particularly in agriculture said that they were beginning to use modern tools and techniques. Nearly 50% had became members of local libraries. More important, there were attitude changes observed: They had acquired the habit of punctuality, they had also acquired the habit of cleanliness, washing their clothes and bathing and this was reflected in their homes and surroundings, they began to take sick persons to hospitals without resorting to old customs or rituals. Although they find it difficult to make both ends meet, they believe in budgeting their income and trying to save whatever is possible. They were also desirous of continuing their education and sending their children to school. This evaluation should prove useful and encouraging for further programmes.

Educational Reform :

The national seminar organised in Madras in December by the Indian Asso-

-ciation of Pre-School Childern, the Tamil Nadu State Social Welfare Board, the State Dept. of social welfare and Balar Kalvi Nilayam developed the integrated programme for the total development of pre-school children combining health, nutrition, education and behavioural aspects of children, with special emphasis on social and emotional development for the full development of the personality of the child. Educating parents and familes on their responsibilities to the pre-school children is also important. As a pilot project for the purpose, voluntary agencies could be persuaded to start 50 centres in a district. In Tamil Nadu as 70 per cent of the 65 lakhs pre-school children lived in rural areas, any such programme should naturally have pronouuced rural bias. An international study conducted by the International Association for the Evaluation of Educational Achievements has revealed some interesting and intriguing features in the growing belief that the home background that youngsters bring to school is more important to their academic achievements than anything the schools do. The study which covered 250,000 students and 50,000 teachers in 22 countries showed that the home background plays an important role in reading, literature and civics while school conditions were more important when it came to science and foreign languages. The Recognised Private Schools (Regulation) Bill (See Vol. IV page 43) which regulates the establishment and running of private schools in Tamil Nadu has been passed by the Assembly. The amendment by the opposition to adopt the system of nomination instead of election of teachers to the school Committee for administration was accepted. This measure will bring some degree of standardisation in the private schools and improvement in running the poorly managed ones.

The idea of identifying and locating brilliant students in the areas of basic science and mathematics and fostering their talents with a view to developing man power resources in the country is gaining ground. The holding of a science exhibition in Delhi (see Vol. IV page 43) recently was a move in this direction. The impact of the National Science Talent Search Scheme has not been significant. It needs to be backed up in the schools. In oder to foster the study of science in schools, the establishment of Science Museums in every district might be of great assistance. Examination reform which has been receiving considerable attention (see Vol. III page 809) recently in the State was further discussed at a workshop held in Loyola College Madras in December 1973 on "Testing Evaluation" The short, multiple choice questions in place of the essay type questions which placed a premium on verbal fluency rather than knowledge of the subject was suggested. In order to reform the question papers, workshops for question paper setters in different universities could be held as examination reform must start with question paper. On the other hand the U.G.C. proposal for creating autonomous colleges (See Vol. III page 809) has met with a certain amount of opposition from the Delhi University Teachers' Association as it is felt that this would affect the federal character of the University.

Technical Education:

The department of metallurgical engineering Banaras Hindu University completed fifty years. The department is among the oldest, largest and pioneer department of the University. It has produced 1,448 graduates since its inception and has today on its rolls 33 teachers, 80 employees and over 200 students actively engaged in practicals and research. The department occupies a built-in area of 40,000 square feet in three buildings. In the last fifty years it has passed through three distinct stages in its development. In the first 20 years it was

engaged in the development of the undergraduate course the B.Sc. (Met. Engg.) degree. Beginning in 1923 with a small department of mining, metallurgy and geology, the department branched into three and eventually the college of mining and metallurgy with two constituent departments emerged in 1944. Then the post-graduate centre for metallurgical research came into existence. For the future, collaboration in research with the Baikov Institute of metallurgy, Moscow U.S.S.R. and the Max-Planck-Institute fuer Metallforschung Stuttgart, West Germany is under Consideration.

Science :

The project envisaging pilot plant studies to develop technology suited to Indian conditions to manufacture oil from coal originally proposed by the Central Fuel Research Institute and cleared by the CSIR as early as September 1971 has now been revived. For various reasons it had been put off but with the backing of the National Research Development Corporation and the Indian Oil Corporation in the current oil crisis it has now been been revived. The NDRC has earmarked Rs. 5 lakhs and the IOC has agreed to contribute another Rs. 5 lakhs for the project out of the Rs. 40 lakhs estimated cost. A committee with representatives from NRDC, the IOC the CSIR, the CFRI and Engineers India Ltd has been formed. That Assam Coal has easy liquification characteristics has been reported by research workers of CFRI. For promoting Science education in the Country Central and State governments could mobilise aid from industrial establishments and for this purpose the formation of a council consisting of representatives from industries, Government and Science Teachers' organisations could be formed to formulate schemes. For example films on science and science education are not now available in regional languages. The All India Science Teachers' conference making these proposals further suggested that the government should take steps to establish an Institute of Science Education. With the gift of the Institute of the cement plant at Moodavathur near Thtuchi put up by the State Industrial Development Corporation to the Cement Research Institute which is a co-operative research body of the Cement Industry and CSIR, a regional station will be established in Tamil Nadu. One of the main projects the CRI hopes to undertake in the immediate future is the designing of a cement plant with a 2,000 tonnes-a-day capacity. The maximum capacity achieved so far is 1,200 tonnes-a-day. The entire work of preparing the project report is expected to be entrusted to the CRI,

Health :

The Tamil Nadu Government is planning to launch a mass nutrition education programme in selected slum clearance tenement areas at a cost of Rs. 1.48 lakhs, in collaboration with CARE. The implementation will be in three phases. The first phase will be the creation of awareness by use of films and posters. The second phase will be to carry the induced awareness to the point of motivation by home visits, group discussions and demonstrations. The final phase will cover personal hygiene, sanitation and immunisation procedure. Thh programme is intended to cover mothers, house-wives, teachers and pre-school children. The campaign is to be first tried in urban areas. Under the Family Planning Programme the government has increased the cash incentives paid to those undergoing sterilisation operation from Rs. 30 to Rs. 60. The All India Medical Conference held in Hubli stressed the need for medical personnel to involve themselves more in family planning programmes as the pro-

gress made so far in this direction has not been satisfactory. The financial outlay proposed for the health programmes in the Fifth Plan is very nearly double that of the Fourth Plan. But in the Fourth Plan only Rs.344 crores out of the outlay Rs. 433.5 crores is expected to be spent (79 per cent). The shortfall is attributed to organisational deficiencies and the time lag in construction and supply of materials. The Fifth Plan programmes are mainly designed to increase accessibility of health services to rural areas correcting regional imbalances. For this purpose a a set of four community development blocks will have one upgraded primary health centre with 30 beds and specialised services in medicine, surgery etc, As an experimental measure a pilot health schemé is to be introduced in 80 sub centres in rural areas covering a population of 8,000 to 10,000 each. In the Fifth Plan no new medical colleges are proposed to be opened as the existing 99 institutions will be adequate to meet the man power requirements. The strategy will be to improve the quality of medical education than quantitative expansion. The emphasis in medical education will be on community care rather than on hospital care.

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V. Employment

On the basis of the educated employment programme and budget approved by the November 1973 session of the legislature (See last issue Vol. IV page 46) the State Directorate of Employment and training has formulated 6 schemes under the Union government's half a million jobs programme and a seventh scheme under the State government's financing. The first scheme provides for 100 unemployed ITI graduates who will be employed in 10 domestic repair and service centres run by entrepreneurs who will provide 5 per cent of the cost, the government 10 per cent and the nationalised banks the remaining 85 per cent. The second scheme arranges to train for one year engineers and other technically qualified persons in self employment activities in employment in industries. The scheme which initially covered engineering degree and diploma holders, has been extended to post graduates in science, architects, agricultural graduates, veterinary graduates, ITI craftsmen, SC/ST graduates and matriculates. During the training the government pays 50 per cent of the salary and the other 50 per cent is met by the industrialist organising the training. The third scheme will employ 65 medical graduates in 13 co-operative dispensaries located in panchayats of 10,000 persons not served by any other medical agency. The fouith scheme mentioned in the last issue employs 10,000 teachers in recognised schools. The fifth scheme employs 1,200 child welfare organisers in 600 new child welfare centres in rural areas, after a 2 month training and 10 months on the job training. The Sixth scheme employs 1,000 technically qualified persons in co-operatives fcr construction and operation of fishing boats, running service centres and processing plants—as a means of further developing our fisheries industry. The government project provides loans of Rs. 10,000 to Rs. 1 lakh for setting up practice in rural areas, under

which loans to 16 medical practitioners had been made by early December 1973. The IOB scheme to aid our small traders and skilled workers in Madras city, referred to in the last issue (Vol.IV page 46) was institutionalised in the Small Business Aid Agency attached to its Mylapore Branch. The agency will ensure quick disposal of applications and disbursement of loans to small traders and skilled workers. It should also extend to their loans the lower rates of interest now applicable to backward areas. Under the differential interest rate scheme (See Vol. III page 170), the Bank can in effect make the larger units subsidise this scheme. The Union ministry of labour survey shows two interesting trends during the decade 1961-71. First the employment in the organised sector which stood at 183.3 lakhs (115·5 lakhs in the public sector and 67 8 lakhs in the private sector) rose by 43.3 per cent during this period. Employment in the public sector rose continuously from 70.5 lakhs in March 1961 to 111.9 lakhs in March 1972 and to 115 lakhs in March 1973 while employment in the private sector was erratic rising from 50.4 lakhs in March 1961 upto March 1966, falling at March 1967 and March 1972 and rising slightly in September 1972. Second the number of man days lost during this period in the last 11 years has been 10 times more in the private sector than in the public sector. In 1972 the private sector employed 68 lakhs and lost 172 lakh man days, while the public sector employed 112 lakh and last only 33 lakh man days. For the Country, the number of man days lost in 1973 showed an improvement over 1972. It was 11.2 million in the first 8 months and using the trend method would be 17 million by the end of the year compared to 20.5 million in 1972. The survey thinks that this was creditable as the Country passing through severe difficulties caused by the power cut, shortage of raw meterials and inflation. It is likely however that these hardships acted as a sobering influence on labour and management in keeping down the number of strikes and lockouts.

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VI. Other Items

Inter disciplinary Research Methodology Seminar:

The Institute is organising with the help of the ICSSR and at the ICSSR Regional Centre, Hyderabad from Monday 1st April to Saturday 13th April an inter disciplinary research methodology seminar for the Southern Universities as recommended by the third meeting of the Heads of Departments of Social Science reported in the last issue. (Vol IV page 49).

1. **Background**: The ICSSR Review Committee Report after examining the training programmes in research methodology organised by 21 institutions, including the three organised by this Institute (Tambaram 1971, Vishakhapatnam 1972, Dharwar 1973) in paragraphs (IV. 10 and IV. 19) of the Report recommends the organisation of inter-disciplinary methodology seminars in the following terms :

"To develop inter-disciplinary research methodology, the ICSSR should help in evolving a common language and tools which can be used and understood by social scientists of different disciplines. To this end it is neceasary that the ICSSR conduct inter-disciplinary methodology seminars for professors and research guides. It can also encourage problem and programme-centred methodology courses which would serve as focal points for social scientists from different disciplines coming together to understand, and become familiar with, one another's language and analytical tools. It is also desirable to prepare text-books on research methodology incorporating insights and experiences peculiar to India. A vocabulary of inter-disciplinary terms might be got together as an aid to inter-disciplinary teaching and research".

The Committee's report in para III 9 ii attempts a definition of the terms as follows :

"Disciplinary Research : A body of concepts and techniques of investigation become closely related with the historical growth of a discipline. In time, these become central to it and the discipline itself comes to be identified with them. When the choice of research theme lies in the area of the traditional concerns of a discipline, when it is investigated by tools and techniques associated with its formative growth and when the analysis follows the conceptual frame-work considered central to that discipline, the research may be called "disciplinary" or "uni-disciplinary research." "

"Multi-disciplinary Research : When a problem is investigated severally through different disciplines according to their own traditional concepts and research techniques, the research endeavour may be described as multi-disciplinary. Such an effort presents different analyses of the problem from standpoints and perspectives of the constituent disciplines."

"Inter-disciplinary Research : This mode of research represents a fusion of the concepts and research techniques from two or more social science disciplines. It represents the conscious inter-penetration of the social sciences with the theoretical and methodological apparatus from one or more leading disciplines. In the process, the separate identities of the participating disciplines merge. What emerges is an integrated perspective. Such an integration is difficult to achieve, but impossible. Communication, organizational behaviour and developmental studies can be cited as successful examples of such integration. To develop a powerful thrust the social sciences must move in that direction".

2. **Programme** :

Accordingly the first Inter-disciplinary Research Methodology Seminar around the theme, "Who are the Poor?" will be organised and will aim at :

(a) Familiarising the participants with the concepts and tools used by the other disciplines with regard to the theme,

(b) Exploring the possibility of an integrated approach to the theme based on
   (i) fusion of disciplinary concepts or enlarging or reorienting the concepts of some disciplines,
   (ii) an agreed methodological frame-work,

(c) Discussing the problems of supervising and guiding inter-disciplinary research projects,

(d) Drapting an inter-disciplinary programme or project which the participating Universities and scientists will undertake under the ICSSR's first priority programme recommended in paragraph V5 iii b of the Review Committee Report.

3. **Schedule:** During the first week the fourteen disciplinary papers on "Who are the poor?" will be discussed. The papers have been requested from among the following seminar participants and 5 other specialists.

1.	Dr. V. Shanmugasundaram	Economics
2.	Dr. T. E. Shanmugam	Psychology
3.	Dr. C. T. Kurien	Economics
4.	Dr. M. Abel	Political Science
5.	Miss Gajalakshmi	Economics
6.	Dr. N. Subramanian	History
7.	Dr. K. H. Cheluva Raju	Politics
8.	Dr. C. Rajagopalan	Sociology
9.	Dr. B. Sarveswara Rao	Economics
10.	Dr. R.V.P. Chandrasekhara Rao	Politics
11.	Dr. G. Parthasarathy	Agricultural Economics
12.	Dr. D. L. Narayana	Economics
13.	Dr. N. Balakrishna Reddy	Geography
14.	Prof. K. S. Sonachalam	Economics
15.	Dr. Gautam Mathur	Economics
16.	Dr. C. Lakshmanan	Sociology
17.	Dr. A. Ramaswami	Economics
18.	Dr. V Krishnamurti	Economics
19.	Mr. Subramanian	Economics
20.	Dr. E. G. Parameshwaran	Psychology
21.	Dr. Malcolm S. Adiseshiah	Economics
22.	Dr. R. P. Mishra	Geography
23.	Prof. Krishnan	Psychology
24.	Dr. E. T. Mathew	Economics
25.	Dr. M. V. Pylee	Management
26.	Dr. Mohammad Mohsin	Commerce
27.	Dr. K. Kulandaivelu	Education
28.	Dr. V. Anantharaman	Economics
29.	Dr. V. Rajagopalan	Economics
30.	Dr. Gopal Sarana	Anthropology
31.	Dr. T. K. Meti	Economics
32.	Dr. C. Parvathamma	Sociology
33.	Dr. G. T. Huchappa	Economics
34.	Dr. Suryanarayanan	Agricultural Economics
35.	Prof. Deshpande	Political Science
36.	Prof. S. A. Deshpande	Economics
37.	Dr. P. K. B. Narayan	Sociology

During the second week an inter-disciplinary research programme or project on poverty will be drafted in the course of which the concepts, frame and tools to be used and the role of each University in executing the project will be agreed upon.

4. **Seminar Details**:

Place

ICSSR Regional Centre, Osmania University Hyderabad.

Duration:

Monday, the 1st April to Saturday, the 13th April, 1974.

Time-Table:

First Week

Monday to Friday:	9 a.m. — 12 noon
	4 p.m. — 6 p.m.
Saturday:	9 a.m. — 12 noon

Second Week

Monday to Saturday: 9 a.m. — 12 noon

The afternoons are free to enable participants to prepare their drafts on the inter-disciplinary programme/project as decided by the Seminar.

5. **Participants**: 35 social science professors and research guides from the Southern Universities will be the participants.

6. **Resource Persons**: For each week of the Seminar two resource persons are being invited to help in the discussion and the development of the integrated approach to the theme. The following specialists are being approached:

1. Prof. Durganand Sinha,
2. Dr. V. M. Dandekar,
3. Dr. Rajni Kothari,
4. Dr. S. Das Gupta,
5. Dr. S. C. Dube,
6. Mr. Rasheed-uddin-Khan,
7. Mr. Ravi Mathai,
8. Mr. M. N. Srinivas,
9. Mr. Bhabtosh Datta,
10. Mr. B. S. Minhas,
11. Mr. P. H. Prabhu,
12. Mr. A. N. Khusro.

7. **Director**: Dr. M. F. Jussawalla, Dean, Faculty of Social Sciences, Osmania University, Hyderabad.

8. **Travel and Hospitality**:

Each participant (from outside Hyderabad) will be paid return air or first-class railway fare and be provided board and lodging and Rs. 10/- per day as pocket expenses.

CECRI get together with Industrialists

The Central Electro-Chemical Research Institute, Karaikudi, organised in early December, in the CSIR complex at Adyar, the first get together of its scientific staff and some 200 entrepreneurs and industrialists engaged in production involving use of electro-chemical materials. The Madras unit of the Institute is concentrating on electroplating and metal finishing. batteries, corrosion and its prevention electro-organic and inorganic products and industrial liaison. As a result of a detailed questionnaire circulated to industrialists on their problems in eletro plating, three projects are being launched. (a) with a view to saving copper consumption, the copper plating of cine are carbon electrodes, (b) leading of storage battery parts which also saves copper and (c) electroplating of surgical instruments. The Institute has so far registered 81 patents and 17 of its processes are yielding Rs. 2.65 lakhs in royalties. The Director presented a detailed paper on electrometallurgy and electro-thermics, magnesium, corrosion and its prevention, electro organic and inorganic products, batteries, electro-plating and metal finishing, and in the discussion that followed there was agreement on the Institute (a) preparing project profiles on all its processes (b) organising refresher courses in important towns and cities and (c) working on the priority projects for the Fifth

Plan on the basis of the agreement between the Institute and the industrialists.

Indian Standards Convention:

The 15th Indian Standards Convention was held at Coimbatore from December 17-22. Its general sessions dealt with traditional designs and today's textiles and standards in the development of handloom industry. It also ran five technical sessions on (a) standardisation for motor and diesel engine driven pump sets for agriculture (b) role of standardisation in textile machinery, (c) standards in book production, (d) in-plant and inter plant standardisation and (e) quality control and certification marking in small scale industries. The technical session on book production attracted the largest number of papers (47) and was attended by 200 publishers, printers, binders, graphic art specialists and editors. It agreed upon some 12 areas in book production where standardisation or guidelines should be prepared or updated by ISI's specialised committee during the coming years.

Institute of Public Undertakings:

The Institute of Public Undertakings set up in 1965 for the systematic study of the problems of public sector undertakings with the Rs. 1 lakh donated by LIC officers has a section in Madras which called in early December a meeting of specialists to launch a programme in the State. It decided to concentrate on two issues for 1974—the problems of capacity utilization and industrial relations in public sector undertakings. A questionnaire has been circulated to the public sector undertakings in the Southern States on these two subjects asking them to list the factor creating problems in capacity utilization and in maintaining industrial peace and the means of overcoming obstacles and bottlenecks. The replies on capacity utilisation will be analysed by the Madras Institute of Development Studies and those on industrial relations by INTUC. On the basis of these two papers, a seminar is to be organised for the public undertakings managers at which these issues will be discussed and a programme of activities by the Institute of Public Undertakings established to help the undertakings.

Indian Economic Conference:

The 56th Conference of the Indian Economic Association was held in St. Joseph's College campus, Tiruchirapalli from 27-29 December 1973. The President of the Association and conference, Dr. V. M. Dandekar in his presidential address, summarised earlier under the National, (Fifth Plan) section called attention to the constraints facing the Country at the end of the Fourth Plan and set forth a programme for achieving the major aim of removing poverty in the Fifth Plan. The instrument proposed was an employment guarantee programme which calls for a restructuration of the production system and an effective distribution system which in turn calls for a minimum income of Rs. 200 and a maximum income of Rs. 2,000/- which during the next Plan period should be reduced to Rs. 1,000/- per month. The resource mobilisation that such a programme called for was detailed together with means of arresting inflation and of raising resources from the rural sector through the Agricultural Holdings Tax. The address highlights the major options facing the Country—the government and the people—in attaining the realisable goal of poverty eradication. It was discussed in the Conference by the economists present and gave rise to detailed comments and suggestions. The conference discussed three technical subjects on the basis of papers which had been prepared on them, namely:

Theory of Profit; Economic Analysis of 1971 Census; ECM and India. It elected the Director of the Madras Institute of Development Studies, Dr. Malcolm S. Adiseshiah as President of the Association and Conference for 1974 and Dr. V. Shanmugasundaram, Professor and Head of the Department of Economics, Madras University as the Secretary. The Association's 57th Conference will be held in Bangalore.

Board for Continuing Education:

The project for the re-education of out of school youth being organised by Sister Catherine Mclevy of St. Thomas Convent School, Madras (See Vol. III page 426) was reviewed and decisions made to launch it at a meeting of the Board for Continuing Education held in mid December. The Board consists of educationists/industrialists and representatives of the State Planning Commission. The government's approval of the project is awaited (the approval is still in process and not as reported in Vol. III page 426), the building for the out of school classes was decided upon and the recruitment and training of the staff for the project established. The Board will, in the light of the two experiments in Madras, expand such out of school programmes throughout the State.

Jaffna College, Vadukottai, Sri Lanka:

Jaffna College in Vadukottai, Sri Lanka is one of the oldest educational institutions in the Country. It now has developed into a full fledged primary and secondary school and a college which offers external degree course studies for the University at Peradeniya. In addition it has diversified its programme and has a farm where agricultural technicians and farmers are being trained in short and long term courses in order to prepare the students for rural employment and help farmers to use modern techniques. A Technical Institute is also being opened now for training students in mechanical, electrical, and wood work for self employment or work as technicians. This year's Bunker Memorial lectures—organised in mid December were an occasion for the review of the educational system of the State and the points at which it needs renovation—out of school education and adult education—and up-dating—science and technology, teacher, and agricultural training.

January Development Seminar:

The January Seminar paper, Tamil Nadu Economy 1971-72 by Mr. R. Ramanujam, Professor of Economics, Vaishnav College, Madras together with a summary of the discussion of the paper at the Seminar on Thursday January 31, chaired by Mr. Alexander Joshua, Deputy Director, Madras Institute of Development Studies, appears as the first article,

Second Article:

A paper on Water Resources: Planning and Utilisation appears as the second article in this issue.

Book Review

A review of the Institute's fifth publication, Land Reform in Tamil Nadu, by Prof. G. Parthasarathy, Head of the Department of Co-operation and Applied Economics, Andhra University, Waltair, appears in the last section.

TAMIL NADU ECONOMY – 1971-72

by

PROF. R. RAMANUJAM

Department of Economics, D. G. Vaishnav College, Madras-29

A decade is a fairly significant unit of time for purposes of economic analysis. The first year of decenniem, therefore acquires importance for its appraisal and for provision for basic data to pursue a perspective plan. It is firstly in this light that the year under review is important for a study of the economic development of Tamil Nadu.

The second aspect of the year stems from the fact that a new era has started in decentralised pianning, with the formation of some type of planning body in all the States in the Indian Union. Tamil Nadu has taken the lead in this sphere by organising a separate planning commission and also getting a perspective plan for a twelve year period of 1972-84 completed on the basis of very detailed studies. Further these activities coincide with the preparation for launching the 5th Five Year Plan at the national level. The performance of the year under review provides as it were the green signal for all these processes at our State level. A study of the year in depth will be a valuable guide for a policy decision. Techniques apart the success depends largely on the base statistics on which future growth rates are calculated. It is in this context that this year is to be taken as land-mark. The valuable work by independent bodies like the M. I. D. S. besides the Governmental Institutions have been building up sufficient data to planning on a better basis. Hence we are in a better position in 1971-72 than the nation found itself in at the beginning of our planning exercise in 1959-51.

The third aspect regarding the year under review is that it marks the beginning of a new era after the plan holiday and limping fourth plan, leaving alone non-economie factors. Even though the year as such had to face enormous troubles like power shortage etc. the entire picture on the whole seems to be encouraging as a preparatory one for pushing up the curve of development.

Let us take up the assessment of the year. The plan followed in this paper is as follows :

Section I provides an insight into macro economic indicators like State income, population trends etc.

Section II deals with the performance of the main institutions like the Government and Financial Institutions.

Section III provides an inventory of achievements in various spheres like agriculture, industries, transport etc.

Section IV provides an assessment of social infrastructures in terms of education, health and so on.

The final section V gives an assesment of the document as whole.

Throughout the study, some attempt is made to keep the perspective plan as the back-drop of the assessment.

SECTION I

(A) The State income is worked out to be Rs. 2,655.30 crores at current prices as against Rs. 2,373.30 crores in 1970-71 giving a rate of growth of 11.9% as com-

pared with 9.9% in 1970-71. This works out at Rs. 643 per capita in the year under review, as compared with Rs. 586 per capita in 1970-71. The change in the statistical study of the State income data in 1790-71 and 1971-72 creates confusion as the nature and extent of real change over the years. (Ref.MIDS Bulletin Vol III Dec. Issue, Page 771). The contribution made by different sectors is given for a study of the composition and no great change is noticed except marginally keeping agriculture and allied sectors as the leading income generators for the State. The perspective plan requires 7.6% annual increase.

(B) The demographic development in the State is well brought out by a number of tables, (1.1 to 1.7 in Vol II of the Appraisal Document). The population of the State is placed at 42.93 on the basis of growth rates recorded in 1961 and 1971 census reports, accounting for 7.51% of the population of the country. In the back-ground of the emphasis on district planning the demographic details regarding district-wise density, literacy growth rate, rural and urban growths, the figures relating to the under-privileged and finally age composition are valuable source material for detailed planning. The literacy percentage have moved from 31.41% to 39.46% over the decade 1961-1971. Apart from the meaning that we attach to the term 'literacy', the actual quantitative percentage is not something about which any one could feel happy. A growth of 8.05%over a decade is indeed a snail's pace.

(C) Employment and Labour: The perspective plan aims at abolition of poverty which in the ultimate analysis means finding work for all the unemployed. The census and other sources of statistical data made use of in the appraisal document are unable to give us a comprehensive rate of increase in unemployment and under-employment and if the annual studies do not take us into realities of the situation, future planning under the perspective plan will become dfficult. The statistical details relating to the growth of employment opportunities in different sectors is a guide to the employment generation capacity over a year. (Vide—report, pages 65 to 68). Thefigures relating to the educated unemployed are also given bringing out the serious nature of the problem.

(D) Price Level: The price level is no doubt an all India problem and efforts of one State alone cannot do much to keep it within limits. But it is a fact of experience that the various measures taken at the national level depend to a large extent on the implementation of the policy at the State level effectively. For example the administration of the Civil Supplies Dept. can mitigate the hardship caused and even keep down regional fluctuations within limits. In that sense Tamil Nadu during 1971-72 has weathered the storm well with a tolerable variation in the wholesale price index (Ref. Table on page 71 of the Document). Stability of administration in regard to certain anti-inflationary measures could keep down inflationary pressure. The crop war price details is only a matter of market information and the cost of living index in major towns is a useful information. It is really a matter for surprise that the year 1939 is kept as the base year in certain tables. A note on the rural price index is a welcome addition and should be pursued in greater detail to work out district plans more effectively.

SECTION II

(A) The Appraisal Document repeats all aspects of the budget of the year. The analysis regarding developmental and non-developmental expenditure, the income

generation aspect, debt position, functional classification of the budget—these are the various aspects touched in the document with relevant statistics. A separate section deals with plan expenditure. This type of study provides a background for plan implementation, and the figures relating to capital formation. The Appendix on State Taxes is an interesting addition to information.

(B) Decentralised administration is touched upon under the section relating to assessment of financial position of major urban and rural bodies of the State. In Vol. II a number of tables are given relating to the Community Development programmes but no detailed assessment is made of the situation in the Appraisal Document.

(C) The Appraisal Document gives an insight into the availability of investible funds from various National and State level financial institutions. There has been a very recognisable jump in the national level help from 17.52 crores to 46.49 crores between the year 1970-71 and 1971-72. A breakdown regarding the various national institutions and the amounts disbursed is also given. It is also possible to find out the share of Tamil Nadu from foreign loans and also the share from LIC which can be studied in relation to the premium income from the State. An analysis of our contribution in the form of premium and other payments and the help that we have secured from these institutions will be an interesting study. It is encouraging to note statistics relating to the profits earned by the Mills which have been taken over by Tamil Nadu Textile Corporation.

SECTION III

(A) Agriculture: The wealth of statistics on all aspects of the progress of agriculture is a salient feature of the report. But the term 'revolution' as applied to agriculture is yet to be fully explored in the Indian context. There are innumerable studies on this question. The UNIDO project carried out by the Madras University and an agrarian study recently being done by Mr. and Mrs. Harisses under the Cambridge and Madras University Agrarian Programme are but a few of such studies nearer home. As has been rightly pointed out in the Dec. issue of MIDS Bulletin, the term has a much wider and deeper connotation. Hence, it would be wrong to christen just high productivity of one crop as a full-fledged revolution. The technological and sociological aspects of green revolution are yet to make themselves felt and fully understood in this country. So, it would be misleading to talk of a rice revolution. The mention about various in-puts and very elaborate statistics about co-operatives have to be carefully analysed to bring out the significance of this important item. In the subtle land reforms figures relating to the area taken over, and distributed among the number of persons who have received it leads us to conclude that farms of less than 2 acres have been created. This has to be studied in relation to productivity, and the problem of small farms.

(B) With regard to the industrial sector the year under review proved to be very encouraging since from a low level of 1% growth in 70-71 it has gone upto 4.7% in 1971-72. The three years 69-70 to 71-72 shows a dip from 5.6% to 1% and a recovery to 4.7%. The Sector-wise study of the various industries gives an idea of progress under various sectors.

(C) In the sphere of economic infrastructure in the major item, power, the State has been exploiting all the available resources besides getting succour from the neighbouring State. The statistics given have to be more fully studied and explained. (Ref. MIDS note referred to

earlier) in the order of consumption we find domestic consumption taking the last place. All other items have registered increases which are higher than the All India averages. The rural electrification programme is as usual topping the list with 90.9% coverage of villages in the rural sector.

The road development and increase in vehicles have shown respectively 3.6 and 4.2% of increase. The number of vessels and the business transacted in the various ports have registered marginal increase. Tamil Nadu also had the full share of branch expansion programme of the Nationalised Banks. A very encouraging feature is the performance of small savings after a perceptible fall noticed in 1969-70.

SECTION IV

The evaluation of the social infrastructural development especially over a year is very difficult since it relates to quality of life. It is only over a period of time that any improvement can be clearly perceived. All the items under this head go to make up what may be termed investment in human capital which has been gaining greater attention in recent times. The generation that will be there by the turn of the century is already born and unless they are properly directed the challenges of the 21st century may prove very difficult.

(A) Education: The task force on education of the Tamil Nadu planning commission and the perspective plan of the State have been attempting to lay down a certain framework for the development of educational structure. The year under review should have initiated at least the preliminaries for effecting far reaching changes that should take place in the system. The statistics in this connection speak the same old language of enrolment figure, etc. which makes one feel that the status quo will continue. No positive step is in sight. The appalling figures of the educated unemployed referred to earlier should have prompted more urgent measures.

(B) In the matter of health service the assessment on the basis of doctor population ratio is usually sighted and the appraisal has also shown that we have improved in this matter. Just as an average income does not mean a poverty-less situation, the existence of a number of doctors is only an arithmetical illusion and does not mean availability of the services, especially in the rural areas. The various efforts being made to attract men to the rural areas is very important though it is yet to succeed. So far the efforts have been half-hearted and the response poor. A study of the nationalised banks scheme for providing funds for the rural practitioners has been started and this should be done with reference to the extension of the service to the rural areas. An appraisal should also attempt to evolve some kind of unit cost of providing health services and use the yardstick to test the efficacy of the expenditure. Such a study can also be passed on to the Municipalities and Community Development units for their guidance and action.

(C) Housing: In regard to housing, the census figures have been used to give a picture of the growth in housing units, the reduction in the number of persons per dwelling etc. In the context of development it is also necessary to study the cost of construction and the National and State level outlay that will be needed. The sources of funds should also be studied. Yet another question that needs study in this connection is the rural housing. An attempt has been made in Tanjore Dist. to provide house sites in the rural areas. This programme

should have come under the review. The methods for preventing undue speculation in the peri-urban and the growing areas form part of the efforts to make house sites available to the common man at reasonable price. In this connection the large acquisition of lands for Slum Improvement in Madras City is worth mentioning.

The problem of water supply and sanitation are closely allied. Even the provision of just an open well without any improvement seems to be a big task in financial terms. The Gandhi Peace Foundation made a calculation that nearly Rs. 500 crores will be needed to just provide a well for each of the villages. In this connection, the formation of the Water Supply and Drainage Board is a step in the right direction for canalisation of water resources which is indeed a real economic progress. The expenditure on raising the status of the under-privileged should be carefully studied to secure the maximum benefit within the shortest period. An economic analysis of the use of funds for the development of backward classes and follow up actions taken will be a useful study for further policy decisions.

SECTION V

An appraisal document is a critical study on the basis of available data on the work done in a given period of time. I may be permitted to quote from the editorial note of MIDS Bulletin of 1973 Vol. III Page 773 "the document as a whole, particularly Vol. II (statistical tables) is valuable and should be studied further to arrive at evaluation of results and to arrive at policy suggestions". The study of the each year should enable the administrator to steer the course of the plan in a manner that will enable both quantitative and qualitative results in real terms. No doubt, there is the handicap of the time lag i.e. in 1974 we get the actuals of 1971-72. But it is possible to devise methods of getting quicker details and also to evaluate the progress during the year in the background of the assessment of actuals. Such an appraisal will be a handy instrument for effective implementation and applicable to correctives at the appropriate times.

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Summary of Discussion

In the discussion of the paper at the Seminar held in the Seminar room of the Institute on Thursday, the 31st January, under the Chairmanship of Mr Alexander Joshua, Deputy Director, Madras Institute of Development Studies, references were made to certain paradoxes which had emerged during the two decades of planing in the economy of the State. For instance there was a rise in the number of illiterates together with the rise in literacy percentage. Another phenomenon was the land reform programme with a concomitant increase in the number of landless agricultural labourers. Further, democracy called for the association of the common man with plan formulation and implementation.

The Seminar paper was based on the Economic Appraisal Tamil Nadu, 1972. While the data provided was useful, the Appraisal could have provided guidelines on pressing economic issues. An example is the explosive rise in Government expenditure which was discussed at the annual Conference of the Indian Economic Association and the Seminar conducted by the Institute of Financial Management. The Appraisal could include, with benefit to research scholars and policy makers, indicators on methods of rationalisation of Government expenditure, a review of the actual achievements, physical and financial, of projects and programmes, identification of the areas of significance together with studies on these and a survey of adaptive technology utilisation. The assessment of the economy for 1971-72 consists of an insight into macro economic indicators, performance of the principal institutions, an inventory of achievements in various sectors, and an assessment of social infrastructures as well as a review of the background document. With reference to macro indicators, unemployment & under-employment are continuous problems and the employment statistics given do not convey the complete picture. Another disturbing factor was the steep rise in price levels. The financial data was summarised, but there was no attempt made to spell out measures of decentralization. There was also no cost-benefit analysis carried out, no estimates of social overheads. Information is lacking on allocation of foreign exchange to Tamil Nadu and the follow up of funds loaned to various undertakings by financial institutions. Studies carried out in the agricultural sector leave an impression of insufficient impact of scientific techniques in this area and employment generation below anticipated levels. Data on economic structure does not detail any area study of village and main road linkages. Educational statistics cannot conceal the fact that in this area we are marking time while palpable frustration among the student community demands action. The figures for health and medical services could be usefully supplemented with studies of hospital management and performance of health services with the objective of optimum resource utilisation. The expenditure on housing is on an impressive scale. However, the absence of a rural housing policy and the haphazard urban development with ill planned structures and faulty costing procedures cannot be overlooked. The programme—that of one well per village—needs minimum qualitative criteria. The utility of the appraisal statistics could be improved by some system of updating such as an ongoing survey.

In the discussion, it was pointed out that Tamil Nadu is one of the few States which publish an annual Economic Appraisal which is a gain. The Appraisal proper, however, should be strictly based on statistical data and it is no part of its function to use optimistic language or provide excuses for failures. Agricultural statistics show a definite rise in rice production, but a fall in coarse grains—particularly cholam production which dropped from 6,01,000 to 5,47,000 tonnes. The production of pulses is also very poor, necessitating the import of about 4/5 of the requirements from outside the State. An intensive programme for non-rice crops is essential as pulses are an important source of proteins for vegetarians and coarse grains which form the poor man's food. Statistics are mainly on multiple cropping and no figures are available for mixed farming. The industrial statistics show unbalanced production growth. Consumer goods production for instance registers the lowest rise.

An opinion was expressed that certain areas are best suited for intensive cultivation of specific crops, like rice in Bengal,

Orissa and Tamil Nadu and pulses in Madhya Pradesh. A change in pattern of production might affect production increase adversely. It was pointed out that the mixed farming programme would meet the needs of dry farming areas which faced considerable under-employment during the year and the product-mix of agriculture, animal husbandry, poultry keeping and apiary is an ideal solution to pass in the Vellore area.

In the context of the appraisal data utilisation for research, a suggestion was made that better use of demographic information could be made for family planning programmes. Altitudinal studies in this area would also be useful.

Political slogans like "green revolution", "full employmeni" are not really indices of progress. What is to be made certain is that we are moving in the right direction in respect of agricultural production, industrial growth and employment generation. It was pointed out that the employment problems are a feature of developed economics also and that it is not always possible to generate employment to keep pace with the population growth.

Some of the problems of industrialisation, urbanisation and rising costs of living were reviewed. A focus of discussion was the deterioration in child care and family living when both husband and wife were working. Another aspect was the need for better planning of housing for the lower income groups.

In sum, the review of the economy 1971-72 throws light on the need for the intensive programme for production of pulses and coarse grains and a change in the industrial product mix for the greater production of consumer goods for the disadvantaged sector and the up-dating of statistical data.

WATER RESOURCES: PLANNING AND USE*

Economics of Water:

I wish to begin with my conclusion, namely, that in the present stage of development of this country and all developing countries, water resource planning, development and management as part of economic and non-economic growth is the necessary condition for national development. The theory of economic growth tells us that the take off to self sustained growth in an undeveloped economy does not take place by all parts of the economy growing at the same time, the same rate and the same pace. This is why economic growth and poverty of the mass of the people, and rapid growth in some geographical areas and backwardness in other areas are found side by side. Economic growth is fast and speedy growth in some economic sectors which are called the lead sectors, so called because these sectors have backward and forward linkages with other sectors and the rapid development in these sectors will spread out to the others, pulling them up also over a period of time. For India and for the under-developed world, water is, or if it is not it should be, one of those lead sectors.

The backward and forward linkages of the water sector is seen in the multi sources of this sector and the multi-purposes of its use. The multi source variables of water include precipitation, evaporation, surface water discharge or re-charge, soil moisture storage of water in oceans, inland seas and lakes, storage of water in glaciers and permanent snow fields, and gronnd water. Ground water itself is of multi source being a consequence of a finite combination of climatic, hydrologic, geologic, topograpic, ecologic soil forming factors in a dynamic integrated system. Further, all these sources of surface waters and ground waters are intimately linked and being but different phases of the hydrological cycle call for economic analysis and use of management techniques. The multi purpose use of water, involves its deployment in agriculture, animal husbandry, fisheries, industry, power generation, navigation, flood conrol, recreation and domestic use to which should be added the rapid increase in population and the accelerated per capita consumption of water due to rising living standards and levels of economic activity. This recognition of the multi-purpose nature of water use is recent. In my own lifetime, I can recall that water resource management and use was thought of primarily in terms of irrigation. Any use of water for industry or domestic use was regarded as a bit of a luxury, a far cry from today's priority in our Fifth plan for protected rural drinking water supply and hydro-generation. In the developed countries the domestic use of water is given precedence over any other and as many more of their people are being supported in industry than in agriculture with the same volume of water, the use of water has a reverse order of priorities there to that found in developing countries It is this multi-source of this resource and its

* Extracts from a special lecture delivered by Dr. Malcolm S. Adiseshiah, at the International Symposium on Ground Water Resources at the College of Engineering, Guindy, Madras, on 26th November 1973.

multi purpose use which makes its planning imperative. I notice that in the massive and impressive documentation of 73 papers for the symposium, there is only one paper on the planning of this resource with a somewhat brief and apologetic reference to the economics of water management, together with a second paper on the need to use the systems approach in water resource planning because of its conjunctive use.

In talking to you about the economics of water resources, its use and management, I shall assume the science, engineering and technology of ground water resources set forth in the 71 papers, which as an economist I do not claim to understand, but encompas in the jargon of my profession, ceteris paribus. On that basis, I shall deal with three planning and management issues: Co-ordination and complementarity; project evalution, and structural consequences of the systems approach.

Co-ordination :

The multiple sources of water resources have a relationship of complementarity and conflict. Their complementarity is known to you as the hydrological cycle under which water is evaporated from the oceans and other water agents, is precipitated on land in the form of rain, snow, hail, or dew, part of which flows back to the sea, part evaporates or transpires in plants and the remaining percolates to become ground waters. Ground waters in turn return to the surface as springs or in streams, sometimes forming the only perennial source for some of our rivers. This cyclic character, this complementarity, should be used for improved water resource management. Ground water reserves should be used more as a buffer to tide over dry periods; undergroud aquifers should be recharged regularly with excess surface water during the monsoons; the salinity of evaporating surface water must not be allowed to pass underground to make ground-water saline, which in turn can pollute fresh run off water. But the hydrological cycle, as just implied, is not simply a gift of nature. It is even more man made and man induced, as expressed in the accelerated use of chemical fertilisers and pesticides in agriculture, the water economy of modern industrial, rural and urban life and the atmospheric interventions, calling for a better understanding of the level of water quality. Water resource management must therefore address itself to these changes in the hydrological cycle brought about by man through river run off regulation, ground water exploitation and the general changes in the environment, So that they make for a mutually reinforcing increase in the quantity and improvement in the quality of water.

But, the many uses of water also have a competitive character. In this State, the Mettur Dam, which is a large river reservoir in the south, is a standing example of the classical clash between the water regulation required for power generation and the needs of irrigation. Even more common is the conflict between the demands of flood control and those of power generation in a reservoir, the former requiring a low level and the latter a high level. There is a similar clash in the use of surface water and ground water in the way in which inter-State disputes on river flows are settled. Some part of this conflict is resolvable. Unesco's three step methodology to determine the area of ground water which eliminates uncertainty to some extent, includes :

Step 1. Establish the requirements of the water supply and the economic limitations placed on construction computing (a) the minimum yield required; (b) the quality of water required; (c) the maximum economic drilling depths; (d) the maximum

pumping life and (e) any limitations on well completion methods.

Step 2. Assemble and evaluate all pertinent data available for the site or area in question including such possible sources as geologic maps, topographic maps, aerial photographs, well and spring records, and climatological records.

Step 3. Undertake a field survey of the various factors that appear to affect the occurrence of ground water at the local site or are to be evaluated. This is a sound methodology not only for locating ground water sources but also for ensuring their optimal use. But what is needed is a plan for the integrated use of both surface and ground water resources by area, on the basis of the allocations made to each and their effect on productivity and equity. As far as I know no such integrated study is available today. We simply talk about their conjunctive use as an article of faith. Another form of the resolution is that part of the irrigation water from a river used on land, seeps down as ground water but appears as return flow lower down the river. Again sewage and industrial wastes water now being discharged into our rivers and wells and polluting them can, if treated, be re-deployed for irrigation and even domestic use. The major conflict is of course between total water availability and the aggregate demand for water. Here every country and every region in the world faces increasing demands and growing competition for the usable water supply. The moral that I draw from this part of my discourse is (a) the need to plan water resources availability and use; (b) the rational water resource planning requires that surface and ground water be treated as a single resource. (c) the formulation of well defined policy for the development of water resources of each region, using water from all sources to maximise development; and (d) the preparation of projects in an order of priority as components of the plan expressing the policy.

Project Evaluation:

I now turn to the second issue, Project Evaluation. Given the limitation of water resources, the alternative uses to which they may be put, the complementary and competitive character of surface waters and ground waters for the various uses, the long gestation high capital intensity of surface water projects which once constructed cannot be changed, and the financing of all water development projects involving a mortgage of the future in so far as they are never paid from current revenues or incomes, emphasise the need for long term projection and economic evaluation of water resources projects, prior to their inclusion in national plans and as an absolute pre-condition to their construction.

The long term projection is usually given in macro-terms. For this country, the potential average annual surface water is estimated at 56 million hectare metres which can irrigate 60 million hectares gross. In the four plan periods, against the target of irrigating 21.9 million hectares by the end of the Fourth Plan, we have provided such facilities for 11.7 million hectares, with 9.8 million hectares of actual utilisation. This is rather a poor performance, leaving a sizeable spill-over of surface water projects to the Fifth and Sixth Plans. The potential ground water resources of the country are estimated at 22 million hectare metres which can irrigate 22 million hectares gross. At the end of the Fourth Plan, ground water irrigation will cover 11 million hectares. This is a better record, involving a near parity in India today as between Government financed surface

water and ground water facilities. Well irrigation accounts for 33.7 per cent of the country's net irrigated area, government canals for 37.3 per cent and private canals and tanks for 29 per cent. This kind of macro projections and estimates even for one use of water irrigation, is useful in setting policy, in pointing to implementation failures and the urgency of setting up an effective monitoring system. It is also a reminder that of an additional 55 million tonnes of food grains that we will need for our population of 650 million by the end of the Fifth Plan, around 60 percent of the increased food must come from irrigation and the other 40 per cent from improved technology and other facilities. The irrigation facilities will have to be provided during the coming plan to the extent of two thirds from our ground water resource. The policies that flow from these global considerations about ground water are: the further intensification of private and public investment in this resource, including rural electrification, more R and D on the behaviour patterns and re-charge capacity of aquifers and new sources of ground water at great depths which today's technology makes feasible, consolidation and collectivisation of fragmented holdings, legislative enactment for the above policies and adequate technical support for their effective execution. These macro estimates need to be accompanied by micro spatial investigations. Taking this country again, as an example, there is little use in referring to the irrigation target of 42 per cent of the cultivable land of the Four Plans, when one State, Punjab, has 58 per cent of its cultivated land under irrigation followed by this State, Tamil Nadu at 43 per cent while 5 States (Maharashtra, Madhya Pradesh, Mysore, Gujarat and Rajasthan) are in the bottom rung at 6 to 12 per cent. Even within a State like Tamil Nadu with high water availability, there are 4 districts (Kanyakumari, Dharmapuri, Salem, and Tirunelveli) which belong to the bottom rung referred to. Such detailed spatial analysis and projections indicate where the investment effort needs to be made.

The economic evaluation of a water resources project involves (a) determining the functions to be included in the project and the extent to which each function should be developed, bearing in mind the conflict of alternative needs, (b) analysing the efficiency of various projects in meeting the national and the individual citizen's goals and on this basis recommending an order of priority, and (c) working out the benefits cost implication of the project to decide on cost allocation, the bases for cost sharing among beneficiaries and the scale of investment that will be justified. The use of the evaluation tool is beset with difficulties. The benefits are direct, (an increase in production, without any one else being worse off), they are also indirect (recreation and fisheries associated with a storage tank) and they are competitive (the water may serve different purposes to attain different goals). This means that the economist and the engineer must assess all needs and uses against various goals and present them to the political authority to decide on the priority of goals and to select the goal for each project. A further problem is that the water resources programme is only one part of the total National or State development programme. Its goals and resource requirements must be tied in with larger goals and overall resources. Here the water resources planner is in a quandry. He is clear as to goals, benefits, costs and investment needs in his own water sector but when I read the section entitled, relation to State or National Plan and its goal, in his project, as I have had to do for a number of water resources projects in the Fifth Plan, I can only see a vast arm of ignorance and ambiguity. This is not the fault of the

scientist or engineer planner but is part of the mixed up and confusing relation between water resources projects and other projects. And then there are various limitations of the evaluation tools themselves stemming from the limitations to using market prices which do not represent real scarcities, some of the benefits and costs not being priced in our economies which are not fully monetised, the changing nature of individual preferences, inter-industry and intra-industry relations and the technology and product mix. On top of all this perhaps what is most discouraging to a water resources planner is that having done his home work on the project faithfully and conscientiously, the political authority which makes the decision (and it is always and rightly the political authority which makes the decision and it is always and rightly the political authority, never the scientist, engineer or economist planner) in more cases than not, responds to political processes and pressures & not to the results of the evaluation.

With all these limitations, the National or State plan must comprise carefully prepared and fully evaluated projects. The evaluation tools used for water resources projects are (a) benefit cost ratio, (b) rates of return (c) rate of effectiveness and (d) cost effectiveness analysis. In the benefits cost ratio analysis, the benefits are the gains due to the projects or the gross increase in national income that it induces, and the costs are the offsetting charges incurred for those benefits. The goal here is to maximise net benefits or net increase in national income. In my Institute, a study on ground water investment in this State over the past two decades shows a high benefit cost ratio of 1:7, supported fully by the regression model constructed for the purpose. The second tool, the rate of return analysis, is the ratio between the project's annual current net benefit and the project investment, which can be used to arrange the projects in an order of priority, from those with the highest rates to a cut off point where the marginal return rate begins. A recent evaluation of ground water development in our State showed that the social rate of return is high if there is surplus labour, making the shadow wage rate zero, and if there is double cropping. The social returns to the limited hydrological survey conducted there, are even higher, implying that investment in wells is socially unjustified unless a hydro geological survey precedes it to determine the siting of wells. The third tool, the rate of effectiveness, is the difference between the annual expenditures in 2 related projects divided by the difference between their investments. The Soviet Union and socialist countries which use this tool find that the desirable limit of effective for water resources projects range from 6.6 per cent to 10 per cent. Finally, the cost effectiveness tool uses the minimum cost rule of thumb, particularly for water resources projects which are a small part of a large project and whose benefits cannot be isolated. In the case of drinking water or water for industrial uses, it is just a waste of time trying to estimate their benefits, using shadow prices as against their costs. The way out here is to choose the water projects which cost the minimum. For evaluation of water resources projects, for industrial use, domestic use, recreational use, flood protection, in fact for all except irrigation and hydel power use, the minimum cost tool should be employed. For irrigation and hydro-power use, the benefits cost tool should be used and cross checked by the rate of return analysis. Such cross checking is necessary because in most developing countries the primary data needed to compute irrigation benefits, namely, the production functions in agriculture and the efficient use of various inputs, the optimum patterns of output and

land use, are simply not available. Hence the input and output co-efficients assumed need to be cross checked by using other tools. In the case of gronnd water use, the evaluation is simplified and prejudged because the farmer has taken over the initiative. We have become addicted in this country to talk of various kinds of revolutions. We talk of the green revolution when we mean that we can grow more wheat, the white revolution when we intend to increase the production of milk, the blue revolution when we refer to our increased fish catches and now the ground water revolution when we refer to Rs. 2,000 crores ($ 280 millions) invested by millions of farmers in wells. For me, an industrial or agricultural or water resource revolution involves, (a) a technological breakthrough and (b) structural change. I will refer to this second compartment in my concluding section. The second has not occurred and so it is inaccurate to use the term revolution. Here it is enough to note that the use in this country of massive loan finance obtained by the farmer to the tune of Rs. 250 crores ($ 36 million) per annum for tapping ground water and having his own controlled irrigation supply as the major input for use of HYVs, fertilisers and multi-cropping styles is based on his positive evaluation of the benefits costs of ground water utilisation. Its financial analysis is simple setting forth the source of finance for the loan which is usually the co-operative credit or land development bank, the rate of interest to be paid and the period over which the principal is to be repaid. Unlike the evaluations tool, the financial analysis of a water resource project is concerned only with direct costs and direct returns. In the case of hydel, industrial and domestic use projects, the financial analysis must provide for full reimbursement of costs and for a development fund out of its projects for subsequent renewal and modernisation. In surface water projects, only the recurring costs and a part of the capital costs should be reimbursed. Flood control, navigation, recreation and other projects are non-reimbursable and should be financed from general revenues. But it should be remembered that drawing up of a financial plan for a project based on its evaluation is a technical planning function. The reimbursement repayment and amortisation decisions are, however, policy matters in all countries and must include within them elements of flexibility and adaptability to local conditions.

Structural consequence :

Water resources planning development and utilisation call not only for co-ordination, evalution and analysis but must also be based on certain structural forces. I am here assuming that scientists, engineers and economists are not only experts in the physical, technical and economic aspects of water resource development, but that they are also human beings interested in the end use of their expertise—which is the well being of their fellow men and women of whom the large majority live in conditions of absolute poverty. We then must begin with noting the shameful fact that so far our water resources programmes have benefitted the well-to-do minority in our countries. Irrigation facilities have in the main benefitted the large farmers. Even in the case of ground water use 90 per cent of loans from co-peratives and land development banks are made to the 50 per cent of large farmers who have 10 acres and above. In the case of hydel power generation, we hold up Haryana and Tamil Nadu as ideal States because 90 per cent of their villages are electrified, the fact being that the first and till recently the only call on power is supposed to be that of the urban rich and large industries. In domestic use, while all our urban areas have pro-

tected water supply, over 25 percent of our villages have no water supply or have water with salinity, iron and flourides even to-day. Flood control has our lowest priority despite the fact that every year our poor who are the only ones devastated by it, lose the equivalent of Rs. 600 crores ($ 86 million) in their cattle, huts, implements and lands, plus of course their lives. All this is not surprising because, as said at the start, water development programmes like all economic development programmes if left to straight market price based evalution analysis, will benefit only those who are already in or can become the lead sector—that is those who have the purchasing power to call the tune and collar the benefits of development. Henee water resources development must be planned within a programme of activities of agrarian reform, decentralization of industrial production, priority to rural electrification, rural water supply and flood control. This kind of integrated planning with an eye on all the national goals is essential for both large surface water projects as well as small ground water projects. The irrigation supplies from large dam constructions are used in the main by large farmers as small farmers are held back because of their many disadvantages stemming from low incomes, fragmented holdings, inequitable tenancy conditions and non-availability of credit. The study I refered to earlier demonstrated that even from the point of view of efficiency, the social rates of return of well irrigation on small family farms are double that on large farms, because the shadow wage rate in the former is zero. Even so the small family farm is denied the resources for well irrigation.

Agricultural policy must help to consolidate the fragmented farms, spread the risk associated with the uncertainty of ground water irrigation faced by the small farmer and provide him with the requisite finance. And it is to this group that the further development of ground water resources by scientists and engineers must be addressed in the interest of both equity and efficiency. Similar structural elements must be incorporated in all water resources development planning and moved forward in its execution which means that if the economic evaluation of two or more water resources planning projects are about equal, preference must be given to those which benefit the small farmer, the rural poor, the small scale industrilist and the weaker sections of the community. To ensure effective execution of the projects the engineers and scientists must mobilise popular understanding and people's participation in the projects. Such are the imperatives of water resources planning and development, if the end purpose of this symposium which I would define as some increase in the well being of man, some decrease in our mass poverty is to be achieved.

BOOK REVIEW

LAND REFORM IN TAMIL NADU

By

G. VENKATARAMANI,

Madras Institute of Development Studies, December 1973, pages 160

This monograph on 'Land Reform in Tamil Nadu' by Shri G. Venkataramani of Madras Institute of Development Studies reviews critically the land reform legislation of the period 1948-1972. This is the second publication to appear on the same topic in recent years, the earlier one being by Prof. K. S. Sonachalam which was sponsored by Research Programmes Committee, Planning Commission, and brings up to date the review of Land Reform measures. In an excellent preface Dr. Malcolm Adiseshiah neatly summarises the scope and the conclusions of the study.

The study covers the period 1948-72 and reviews besides legislation on Ceiling and Tenancy, Minimum Wages Act, Small Farmers' and Marginal Farmers' Development Agencies, Co-operative Farming Agencies, Credit Societies and Co-operative Services. The inclusion of measures other than ceiling and tenancy in the monograph is quite legitimate though the author had to sacrifice analytical depth.

The study is based exclusively on secondary sources, viz., legislative enactments, land reforms progress reports prepared by the Board of Revenue, Legislative Assembly Debates, Census, 1961 and 1971, and Prof. Sonachalam's earlier study on land reform etc. Secondary data on structure of land holdings are not always available in a form that permit analysis of the complex nature of changes in agrarian structure, and analysis suffers from constraints of data.

It should, in fairness to the author, be mentioned that the author is aware of this limitation and he has deliberately chosen to present the analysis only at a broad level of aggregation. For deeper insights even in relation to "Concurrent and Transitional Evaluation" of land reform one has to turn to depth studies. One useful source of secondary data to highlight the loopholes in legislation that prevent effective implementation of land reforms is the legal proceedings at various level in the process of implementation, which could have been tapped by the author. The study brings to focus some of the dfficulties involved in using the census data in presenting a pre and post-reform changes in agrarian structure, and also the misleading inferences that one is prone to draw if adequate care is not paid to conceptual changes in the census enumeration. To illustrate from this study, number of agriculturer labourers per unit of cultivated area in 1971 are compared with the corresponding number in 1961, and it is concluded that a number of cultivators might have been dispossessed of their lands under the impetus of market forces thanks to the tendency towards the growing economic concentration in the ownership of land (Pages 77 to 79). It may be that there is

growing economic concentration but the inference cannot be established by comparing the census data of 1971 with that of 1961. A closer look at the census data will convince one that these cannot be used for purposes of comparison and for the purpose in view without making adjustments for the differences in the concept of workers. It is wrong to presume, as has been done in the study under review, that the use of 'ratio of labourers per unit of cultivated area' gives a tool neutral to differences in definition. The changes in definition adopted in 1971 census have reduced the recorded number of female cultivators from 2,173 thousand in 1961 to 562 thousand in 1971 since all those earning dependents who were formerly recorded under workers ceased to be categorised workers in 1961 census.

In view of this the reported reduction of cultivators per unit of cultivated area is spurious.

The data on pattas drawn from Jambandi Returns, Board of Revenue, it is generally known to research workers on 'Land Tenure', are known to have only a very remote relationship to the structure of ownership of holdings and the elaborate exercise based on these data (pages 81 to 112) in the opinion of this reviewer, has only a doubtful utility. I may illustrate this point by quoting Andre Beteille who made a depth study of a Tanjore village.

"Not every individual who has a title to land constitutes an effective landowning unit. Often the holdings of several individuals are concentrated in a unit which is managed and administered by a person who may not himself have any formal title to land. The biggest *Mirasdar* resident in Sripuram has very little land in his own name. Some of it is in his wife's name, some in her mother's name and some even in the name of relatives who do not form a part of this household. All this land, nonetheless, constitutes a single unit for productive purposes, being controlled and managed by a single individual who is all but its legal owner"[1].

The conclusion of the study do not differ from those obtained in other areas. The surplus land distributed under the ceiling legislation is small, and its redistribution has not really affected the ownership pattern. The state has made only slow progress in the area of securing the rights of Tenants. Measures relating to consolidation of holdings and co-operative farming have not achieved any worthwhile results. The result as Dr. Malcolm Adiseshiah sums up neatly in his preface is that "neither the equity nor the increasing production objective has been well served".

The major recommendation of the study are: (1) Ceiling law should be amended as a start by ordinance retro-actively from 1965 to 10 standard acres. (2) The needs of the Scheduled castes should receive priority in the redistribution of land rendered surplus from the ceiling law and (3) state should set up an increasing number of large-sized holdings both for their demonstration effect as a means of countering fragmentation and disadvantages of small holdings. Of the three major recommendations, recommendation (2) is unexceptionable; but through distribution of small plots of land to the scheduled castes without the necessary financial support to enable them to cultivate them, land assigned to them is likely to revert to the powerful in the village. A radical reduction in ceiling levels to be effective needs a shift in power structure

1. Andre Beteille, *Caste, Class, and Power, Changing Patterns of Stratification in a Tanjore Village*, Bombay: Oxford University Press, 1966 p.

at the grass roots level to the poorer sections who are likely to be the beneficiaries of these acts, or alternatively, a strong state which could compel the rich within the agricultural sector to forego their existing privileges, and act on behalf of the poor. In the absence of these, radical pronouncements have only the effect of freezing the land market, deterring long-term investments, and achieve little perceptible distributive justice. Alternatively such pronouncements set the pace, as has happened in some parts of the country, for capitalist development in agriculture resulting in dispossession of small tenants and a growth in the class of rural proletariat.

It is the major weakness of the current land reform programme that it has been conceived more as a redistributive programme, than as a lever for mobilisation of the rural weak to gain control over rural resources for the benefit of the poor and for rapid development of rural areas. To achieve the latter purpose the surplus land should be conceived as the base around which rural labour is organised and moved into various construction activities in the rural areas. Other measures like the programmes of small farmer and development agencies and crash programmes of employment should be woven into land reform programmes. The land reform programme should be a major step through which feudal forms of exploitation in rural areas are eliminated and a non-capitalist path of development not only within agriculture but in all other construction activities in rural areas are made possible. Viewed from this perspective there is a strong case for organising rural labour on large co-operative/collective farms-cum-labour contract societies. Such organisations will provide adequate safeguards against reversal to pre-capitalist form of exploitation of alternatively emergence of capitalists forms of development in agriculture. Is this possible, given the existing power structure and current confusion on goals as well as means? Perhaps, things may be allowed to drift while economics pundits continue to quarrel over problems of growth and social justice.

The Madras Institute of Development Studies and Shri Venkataramani should be commended for reviving our interest in the subject of Land Reform.

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